

Great Western

Well Name: **Gustafson EF 31-374HN**

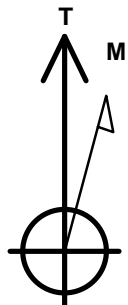
Surface Location: Gustafson Pad Sec.31-T7N-R65W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4828.2

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1439921.33	3219303.47	40.538306	-104.710964	
RKB - 16.5 WELL @ 4844.7ft (RKB - 16.5)						

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 280'FNL & 1357'FWL	1.0	0.0	0.0	Point
BHL 470'FSL & 1713'FWL	7084.7	-4543.1	346.1	Point
Entry Pt. 460'FNL & 1722'FWL	7084.7	-191.3	363.6	Point



Azimuths to True North
Magnetic North: 8.51°

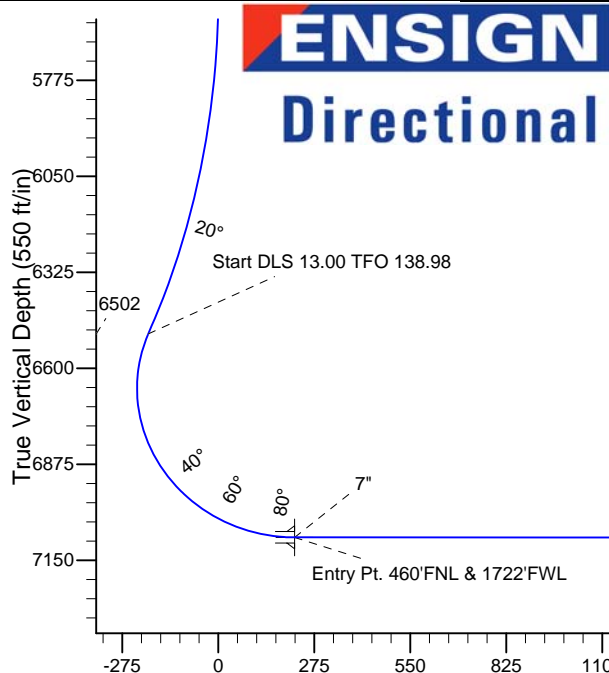
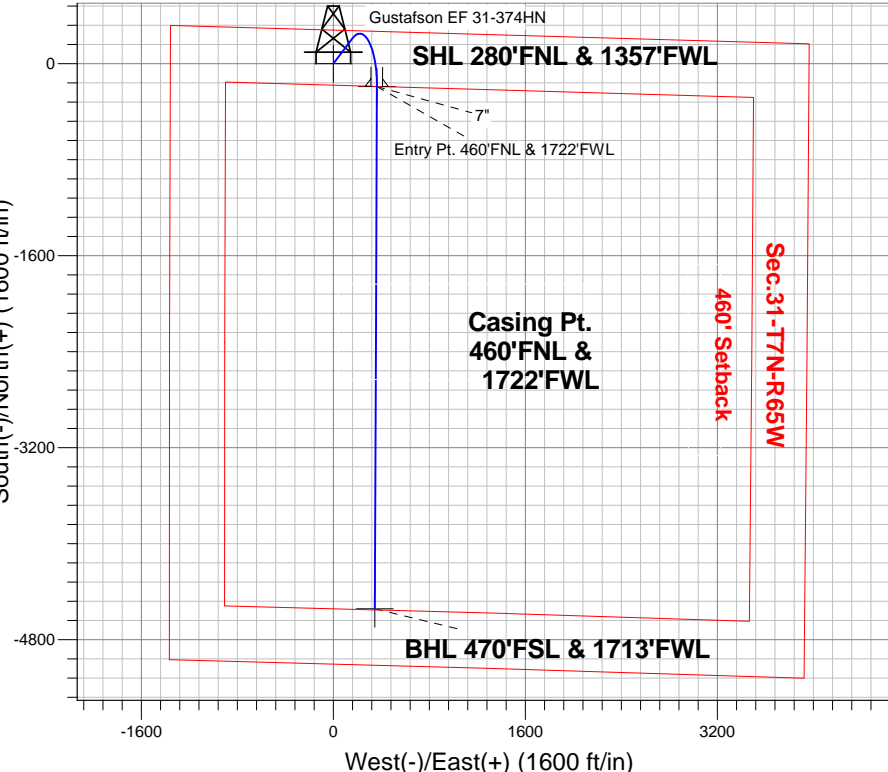
Magnetic Field
Strength: 52945.3snT
Dip Angle: 67.08°
Date: 12/16/2013
Model: IGRF2010

Gustafson Pad Sec.31-T7N-R65W
Gustafson EF 31-374HN
Plan #1 (12-16-13)
12:08, December 18 2013

ANNOTATIONS

TVD	MD	Annotation
5526.0	5526.0	KOP - Start Build 3.00
6501.8	6550.1	Start DLS 13.00 TFO 138.98
7084.7	11775.9	TD at 11775.9

South(-)/North(+) (1600 ft/in)



SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	5526.0	0.00	0.00	5526.0	0.0	0.0	0.00	0.00	0.0	
3	6529.3	30.10	37.21	6483.8	205.1	155.7	3.00	37.21	-192.7	
4	6550.1	30.10	37.21	6501.8	213.4	162.0	0.00	0.00	-200.5	
5	7424.1	90.00	180.24	7084.7	-191.3	363.6	13.00	138.98	218.3	Entry Pt. 460'FNL & 1722'FWL
6	7425.1	90.00	180.23	7084.7	-192.3	363.6	1.00	-90.00	219.3	
7	11775.9	90.00	180.23	7084.7	-4543.1	346.1	0.00	0.00	4556.2	BHL 470'FSL & 1713'FWL

Vertical Section at 175.64° (550 ft/in)



Great Western

SEC.31-T7N-R65W

Gustafson Pad Sec.31-T7N-R65W

Gustafson EF 31-374HN

Wellbore #1

Plan: Plan #1 (12-16-13)

Standard Planning Report

18 December, 2013

Plan Sections										
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	
5,526.0	0.00	0.00	5,526.0	0.0	0.0	0.00	0.00	0.00	0.00	
6,529.3	30.10	37.21	6,483.8	205.1	155.7	3.00	3.00	0.00	37.21	
6,550.1	30.10	37.21	6,501.8	213.4	162.0	0.00	0.00	0.00	0.00	
7,424.1	90.00	180.24	7,084.7	-191.3	363.6	13.00	6.85	16.36	138.98	Entry Pt. 460'FNL & 171'FNL
7,425.1	90.00	180.23	7,084.7	-192.3	363.6	1.00	0.00	-1.00	-90.00	
11,775.9	90.00	180.23	7,084.7	-4,543.1	346.1	0.00	0.00	0.00	0.00	BHL 470'FSL & 171'FNL

Database:	Landmark	Local Co-ordinate Reference:	Well Gustafson EF 31-374HN
Company:	Great Western	TVD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Project:	SEC.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Site:	Gustafson Pad Sec.31-T7N-R65W	North Reference:	True
Well:	Gustafson EF 31-374HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (12-16-13)		

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 280'FNL & 1357'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
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00

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Project:	SEC.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Site:	Gustafson Pad Sec.31-T7N-R65W	North Reference:	True
Well:	Gustafson EF 31-374HN	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (12-16-13)		

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)
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,526.0	0.00	0.00	5,526.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 3.00									
5,600.0	2.22	37.21	5,600.0	1.1	0.9	-1.1	3.00	3.00	0.00
5,700.0	5.22	37.21	5,699.8	6.3	4.8	-5.9	3.00	3.00	0.00
5,800.0	8.22	37.21	5,799.1	15.6	11.9	-14.7	3.00	3.00	0.00
5,900.0	11.22	37.21	5,897.6	29.1	22.1	-27.3	3.00	3.00	0.00
6,000.0	14.22	37.21	5,995.1	46.6	35.4	-43.8	3.00	3.00	0.00
6,100.0	17.22	37.21	6,091.4	68.2	51.8	-64.1	3.00	3.00	0.00
6,200.0	20.22	37.21	6,186.1	93.7	71.2	-88.1	3.00	3.00	0.00
6,300.0	23.22	37.21	6,279.0	123.2	93.6	-115.7	3.00	3.00	0.00
6,400.0	26.22	37.21	6,369.8	156.5	118.8	-147.0	3.00	3.00	0.00
6,500.0	29.22	37.21	6,458.3	193.6	147.0	-181.8	3.00	3.00	0.00
6,529.3	30.10	37.21	6,483.8	205.1	155.7	-192.7	3.00	3.00	0.00
6,550.1	30.10	37.21	6,501.8	213.4	162.0	-200.5	0.00	0.00	0.00
Start DLS 13.00 TFO 138.98									
6,600.0	25.53	47.12	6,545.9	230.7	177.5	-216.6	13.00	-9.16	19.86
6,700.0	19.64	77.86	6,638.5	249.0	209.9	-232.3	13.00	-5.89	30.74
6,800.0	21.10	115.60	6,732.7	244.7	242.7	-225.6	13.00	1.45	37.74
6,900.0	28.80	140.88	6,823.5	218.2	274.2	-196.7	13.00	7.70	25.28
7,000.0	39.22	154.95	6,906.4	170.6	302.9	-147.1	13.00	10.42	14.07
7,100.0	50.69	163.66	6,977.2	104.6	327.3	-79.4	13.00	11.48	8.71
7,200.0	62.63	169.84	7,032.1	23.4	346.1	3.0	13.00	11.94	6.19
7,300.0	74.79	174.80	7,068.3	-68.8	358.4	95.8	13.00	12.16	4.96
7,400.0	87.04	179.21	7,084.1	-167.2	363.4	194.3	13.00	12.25	4.41
7,424.1	90.00	180.24	7,084.7	-191.3	363.6	218.3	13.00	12.27	4.28
7" - Entry Pt. 460'FNL & 1722'FWL									
7,425.1	90.00	180.23	7,084.7	-192.3	363.6	219.3	1.00	0.00	-1.00
7,500.0	90.00	180.23	7,084.7	-267.2	363.3	294.0	0.00	0.00	0.00
7,600.0	90.00	180.23	7,084.7	-367.2	362.9	393.7	0.00	0.00	0.00
7,700.0	90.00	180.23	7,084.7	-467.2	362.5	493.3	0.00	0.00	0.00
7,800.0	90.00	180.23	7,084.7	-567.2	362.1	593.0	0.00	0.00	0.00
7,900.0	90.00	180.23	7,084.7	-667.2	361.7	692.7	0.00	0.00	0.00
8,000.0	90.00	180.23	7,084.7	-767.1	361.3	792.4	0.00	0.00	0.00
8,100.0	90.00	180.23	7,084.7	-867.1	360.9	892.1	0.00	0.00	0.00
8,200.0	90.00	180.23	7,084.7	-967.1	360.5	991.7	0.00	0.00	0.00
8,300.0	90.00	180.23	7,084.7	-1,067.1	360.1	1,091.4	0.00	0.00	0.00
8,400.0	90.00	180.23	7,084.7	-1,167.1	359.6	1,191.1	0.00	0.00	0.00
8,500.0	90.00	180.23	7,084.7	-1,267.1	359.2	1,290.8	0.00	0.00	0.00
8,600.0	90.00	180.23	7,084.7	-1,367.1	358.8	1,390.5	0.00	0.00	0.00
8,700.0	90.00	180.23	7,084.7	-1,467.1	358.4	1,490.1	0.00	0.00	0.00
8,800.0	90.00	180.23	7,084.7	-1,567.1	358.0	1,589.8	0.00	0.00	0.00
8,900.0	90.00	180.23	7,084.7	-1,667.1	357.6	1,689.5	0.00	0.00	0.00
9,000.0	90.00	180.23	7,084.7	-1,767.1	357.2	1,789.2	0.00	0.00	0.00
9,100.0	90.00	180.23	7,084.7	-1,867.1	356.8	1,888.9	0.00	0.00	0.00
9,200.0	90.00	180.23	7,084.7	-1,967.1	356.4	1,988.5	0.00	0.00	0.00
9,300.0	90.00	180.23	7,084.7	-2,067.1	356.0	2,088.2	0.00	0.00	0.00
9,400.0	90.00	180.23	7,084.7	-2,167.1	355.6	2,187.9	0.00	0.00	0.00
9,500.0	90.00	180.23	7,084.7	-2,267.1	355.2	2,287.6	0.00	0.00	0.00
9,600.0	90.00	180.23	7,084.7	-2,367.1	354.8	2,387.3	0.00	0.00	0.00

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)	
9,700.0	90.00	180.23	7,084.7	-2,467.1	354.4	2,486.9	0.00	0.00	0.00	
9,800.0	90.00	180.23	7,084.7	-2,567.1	354.0	2,586.6	0.00	0.00	0.00	
9,900.0	90.00	180.23	7,084.7	-2,667.1	353.6	2,686.3	0.00	0.00	0.00	
10,000.0	90.00	180.23	7,084.7	-2,767.1	353.2	2,786.0	0.00	0.00	0.00	
10,100.0	90.00	180.23	7,084.7	-2,867.1	352.8	2,885.7	0.00	0.00	0.00	
10,200.0	90.00	180.23	7,084.7	-2,967.1	352.4	2,985.3	0.00	0.00	0.00	
10,300.0	90.00	180.23	7,084.7	-3,067.1	352.0	3,085.0	0.00	0.00	0.00	
10,400.0	90.00	180.23	7,084.7	-3,167.1	351.6	3,184.7	0.00	0.00	0.00	
10,500.0	90.00	180.23	7,084.7	-3,267.1	351.2	3,284.4	0.00	0.00	0.00	
10,600.0	90.00	180.23	7,084.7	-3,367.1	350.8	3,384.0	0.00	0.00	0.00	
10,700.0	90.00	180.23	7,084.7	-3,467.1	350.4	3,483.7	0.00	0.00	0.00	
10,800.0	90.00	180.23	7,084.7	-3,567.1	350.0	3,583.4	0.00	0.00	0.00	
10,900.0	90.00	180.23	7,084.7	-3,667.1	349.6	3,683.1	0.00	0.00	0.00	
11,000.0	90.00	180.23	7,084.7	-3,767.1	349.2	3,782.8	0.00	0.00	0.00	
11,100.0	90.00	180.23	7,084.7	-3,867.1	348.8	3,882.4	0.00	0.00	0.00	
11,200.0	90.00	180.23	7,084.7	-3,967.1	348.4	3,982.1	0.00	0.00	0.00	
11,300.0	90.00	180.23	7,084.7	-4,067.1	348.0	4,081.8	0.00	0.00	0.00	
11,400.0	90.00	180.23	7,084.7	-4,167.1	347.6	4,181.5	0.00	0.00	0.00	
11,500.0	90.00	180.23	7,084.7	-4,267.1	347.2	4,281.2	0.00	0.00	0.00	
11,600.0	90.00	180.23	7,084.7	-4,367.1	346.8	4,380.8	0.00	0.00	0.00	
11,700.0	90.00	180.23	7,084.7	-4,467.1	346.4	4,480.5	0.00	0.00	0.00	
11,775.9	90.00	180.23	7,084.7	-4,543.0	346.1	4,556.2	0.00	0.00	0.00	
TD at 11775.9 - BHL 470'FSL & 1713'FWL										

Casing Points						
Measured Depth (ft)	Vertical Depth (ft)		Name	Casing Diameter (")	Hole Diameter (")	
7,424.1	7,084.7	7"		7	7-1/2	

Plan Annotations					
	Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
			+N/-S	+E/-W	
			(ft)	(ft)	
	5,526.0	5,526.0	0.0	0.0	KOP - Start Build 3.00
	6,550.1	6,501.8	213.4	162.0	Start DLS 13.00 TFO 138.98
	11,775.9	7,084.7	-4,543.0	346.1	TD at 11775.9



Great Western

SEC.31-T7N-R65W

Gustafson Pad Sec.31-T7N-R65W

Gustafson EF 31-374HN

Wellbore #1

Plan #1 (12-16-13)

Anticollision Report

18 December, 2013

Company:	Great Western	Local Co-ordinate Reference:	Well Gustafson EF 31-374HN
Project:	SEC.31-T7N-R65W	TVD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Reference Site:	Gustafson Pad Sec.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gustafson EF 31-374HN	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 (12-16-13)	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		
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	92.10	-2.2	59.5	59.5	50.3	9.22	6.459		
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	92.10	-2.2	59.5	59.5	49.9	9.66	6.159		
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	92.10	-2.2	59.5	59.5	49.4	10.11	5.885		
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	92.10	-2.2	59.5	59.5	49.0	10.56	5.634		
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	92.10	-2.2	59.5	59.5	48.5	11.01	5.404		
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	92.10	-2.2	59.5	59.5	48.1	11.46	5.192		
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	92.10	-2.2	59.5	59.5	47.6	11.91	4.997		
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	92.10	-2.2	59.5	59.5	47.2	12.36	4.815		
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	92.10	-2.2	59.5	59.5	46.7	12.81	4.646		
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	92.10	-2.2	59.5	59.5	46.3	13.26	4.488		
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	92.10	-2.2	59.5	59.5	45.8	13.71	4.341		
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	92.10	-2.2	59.5	59.5	45.4	14.16	4.203		
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	92.10	-2.2	59.5	59.5	44.9	14.61	4.074		
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	92.10	-2.2	59.5	59.5	44.5	15.06	3.952		
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	92.10	-2.2	59.5	59.5	44.0	15.51	3.838		
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	92.10	-2.2	59.5	59.5	43.6	15.96	3.730		
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	92.10	-2.2	59.5	59.5	43.1	16.41	3.628		
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	92.10	-2.2	59.5	59.5	42.7	16.86	3.531		
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	92.10	-2.2	59.5	59.5	42.2	17.31	3.439		
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	92.10	-2.2	59.5	59.5	41.8	17.76	3.352		
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	92.10	-2.2	59.5	59.5	41.3	18.21	3.269		
4,200.0	4,200.0	4,200.0	4,200.0	9.3	9.3	92.10	-2.2	59.5	59.5	40.9	18.66	3.191		
4,300.0	4,300.0	4,300.0	4,300.0	9.6	9.6	92.10	-2.2	59.5	59.5	40.4	19.11	3.115		
4,400.0	4,400.0	4,400.0	4,400.0	9.8	9.8	92.10	-2.2	59.5	59.5	40.0	19.55	3.044		
4,500.0	4,500.0	4,500.0	4,500.0	10.0	10.0	92.10	-2.2	59.5	59.5	39.5	20.00	2.975		
4,600.0	4,600.0	4,600.0	4,600.0	10.2	10.2	92.10	-2.2	59.5	59.5	39.1	20.45	2.910		
4,700.0	4,700.0	4,700.0	4,700.0	10.5	10.5	92.10	-2.2	59.5	59.5	38.6	20.90	2.847		
4,800.0	4,800.0	4,800.0	4,800.0	10.7	10.7	92.10	-2.2	59.5	59.5	38.2	21.35	2.788		
4,900.0	4,900.0	4,900.0	4,900.0	10.9	10.9	92.10	-2.2	59.5	59.5	37.7	21.80	2.730 CC, ES, SF		
5,000.0	5,000.0	4,997.1	4,997.0	11.1	11.1	91.30	-1.4	61.8	61.9	39.7	22.24	2.784		
5,100.0	5,100.0	5,093.7	5,093.3	11.4	11.3	89.21	0.9	68.8	69.1	46.4	22.66	3.049		
5,200.0	5,200.0	5,189.3	5,188.2	11.6	11.5	86.58	4.8	80.2	81.2	58.1	23.09	3.518		
5,300.0	5,300.0	5,283.4	5,280.9	11.8	11.7	84.00	10.1	95.8	98.2	74.7	23.51	4.178		
5,400.0	5,400.0	5,375.7	5,370.8	12.0	12.0	81.79	16.6	115.3	120.1	96.2	23.94	5.017		
5,500.0	5,500.0	5,465.8	5,457.6	12.2	12.2	80.00	24.4	138.3	146.7	122.4	24.38	6.019		
5,600.0	5,600.0	5,553.8	5,541.1	12.5	12.5	41.21	33.2	164.5	176.8	152.1	24.72	7.153		
5,700.0	5,699.8	5,640.3	5,621.9	12.7	12.8	40.53	43.1	193.7	207.7	182.6	25.08	8.279		
5,800.0	5,799.1	5,725.3	5,699.9	12.9	13.1	40.51	53.9	225.9	238.9	213.5	25.41	9.404		
5,900.0	5,897.6	5,809.0	5,775.1	13.1	13.5	40.89	65.6	260.6	270.7	245.0	25.71	10.528		
6,000.0	5,995.1	5,891.2	5,847.3	13.4	13.9	41.52	78.2	297.8	302.8	276.8	25.99	11.651		
6,100.0	6,091.4	5,980.8	5,924.5	13.6	14.5	42.51	92.7	340.9	334.7	308.4	26.30	12.728		
6,200.0	6,186.1	6,075.8	6,006.3	13.9	15.1	43.92	108.1	386.8	363.5	336.9	26.64	13.646		
6,300.0	6,279.0	6,171.4	6,088.5	14.2	15.8	45.64	123.7	432.9	389.1	362.1	27.04	14.393		
6,400.0	6,369.8	6,267.2	6,170.9	14.6	16.5	47.66	139.3	479.1	411.9	384.4	27.53	14.961		
6,500.0	6,458.3	6,362.9	6,253.3	15.0	17.2	49.96	154.9	525.4	432.1	403.9	28.16	15.344		
6,600.0	6,545.9	6,459.1	6,336.1	15.5	18.0	44.84	170.5	571.8	450.7	421.6	29.10	15.486		
6,700.0	6,638.5	6,557.4	6,420.6	15.9	18.9	18.58	186.5	619.3	468.0	438.1	29.84	15.682		
6,800.0	6,732.7	6,653.5	6,503.4	16.2	19.7	-17.58	202.1	665.7	483.0	452.9	30.17	16.012		
6,900.0	6,823.5	6,742.6	6,580.0	16.4	20.5	-43.15	216.6	708.7	498.0	467.8	30.28	16.446		
7,000.0	6,906.4	6,822.0	6,648.4	16.5	21.2	-57.94	229.4	747.0	517.0	486.5	30.44	16.982		
7,100.0	6,977.2	6,913.9	6,728.3	16.6	22.0	-67.66	231.9	791.8	542.1	511.4	30.76	17.623		
7,200.0	7,032.1	7,030.1	6,827.3	16.7	22.8	-75.20	208.0	847.1	571.9	540.6	31.25	18.302		

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 Gustafson EF 31-374HN
Project:	SEC.31-T7N-R65W	TVD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Reference Site:	Gustafson Pad Sec.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gustafson EF 31-374HN	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 (12-16-13)	Offset TVD Reference:	Offset Datum

Offset Design Gustafson Pad Sec.31-T7N-R65W - Gustafson EF 31-372HN - Wellbore #1 - Plan #1 (12-16-13)												Offset Site Error:	0.0ft
Survey Program: 0-MWD												Offset Well Error:	0.0ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
7,300.0	7,068.3	7,195.7	6,951.6	16.9	23.7	-82.53	125.1	916.3	602.1	570.3	31.82	18.923	
7,400.0	7,084.1	7,452.2	7,070.2	17.2	24.6	-89.05	-88.6	981.5	623.2	590.6	32.60	19.118	
7,500.0	7,084.7	7,635.7	7,084.7	17.8	25.0	-90.00	-270.6	988.6	625.4	591.5	33.90	18.447	
7,600.0	7,084.7	7,735.7	7,084.7	18.5	25.4	-90.00	-370.6	988.1	625.2	589.9	35.35	17.685	
7,700.0	7,084.7	7,835.7	7,084.7	19.3	25.9	-90.00	-470.6	987.5	625.1	587.9	37.15	16.826	
7,800.0	7,084.7	7,935.7	7,084.7	20.4	26.5	-90.00	-570.6	987.0	624.9	585.7	39.24	15.926	
7,900.0	7,084.7	8,035.7	7,084.7	21.5	27.3	-90.00	-670.6	986.4	624.8	583.2	41.58	15.025	
8,000.0	7,084.7	8,135.7	7,084.7	22.8	28.1	-90.00	-770.6	985.9	624.6	580.5	44.14	14.153	
8,100.0	7,084.7	8,235.7	7,084.7	24.1	29.1	-90.00	-870.6	985.3	624.5	577.6	46.86	13.326	
8,200.0	7,084.7	8,335.7	7,084.7	25.5	30.2	-90.00	-970.6	984.8	624.4	574.6	49.74	12.552	
8,300.0	7,084.7	8,435.7	7,084.7	27.0	31.4	-90.00	-1,070.6	984.3	624.2	571.5	52.74	11.835	
8,400.0	7,084.7	8,535.7	7,084.7	28.5	32.6	-90.00	-1,170.6	983.7	624.1	568.2	55.85	11.175	
8,500.0	7,084.7	8,635.7	7,084.7	30.1	34.0	-90.00	-1,270.5	983.2	623.9	564.9	59.04	10.568	
8,600.0	7,084.7	8,735.7	7,084.7	31.7	35.3	-90.00	-1,370.5	982.6	623.8	561.5	62.30	10.012	
8,700.0	7,084.7	8,835.7	7,084.7	33.3	36.8	-90.00	-1,470.5	982.1	623.6	558.0	65.63	9.502	
8,800.0	7,084.7	8,935.7	7,084.7	35.0	38.3	-90.00	-1,570.5	981.5	623.5	554.5	69.01	9.035	
8,900.0	7,084.7	9,035.7	7,084.7	36.7	39.8	-90.00	-1,670.5	981.0	623.3	550.9	72.44	8.605	
9,000.0	7,084.7	9,135.7	7,084.7	38.4	41.4	-90.00	-1,770.5	980.4	623.2	547.3	75.91	8.210	
9,100.0	7,084.7	9,235.7	7,084.7	40.2	42.9	-90.00	-1,870.5	979.9	623.1	543.6	79.41	7.846	
9,200.0	7,084.7	9,335.7	7,084.7	41.9	44.6	-90.00	-1,970.5	979.3	622.9	540.0	82.94	7.510	
9,300.0	7,084.7	9,435.7	7,084.7	43.7	46.2	-90.00	-2,070.5	978.8	622.8	536.3	86.50	7.200	
9,400.0	7,084.7	9,535.7	7,084.7	45.5	47.9	-90.00	-2,170.5	978.3	622.6	532.5	90.08	6.912	
9,500.0	7,084.7	9,635.7	7,084.7	47.3	49.6	-90.00	-2,270.5	977.7	622.5	528.8	93.69	6.644	
9,600.0	7,084.7	9,735.7	7,084.7	49.1	51.3	-90.00	-2,370.5	977.2	622.3	525.0	97.31	6.396	
9,700.0	7,084.7	9,835.7	7,084.7	50.9	53.0	-90.00	-2,470.5	976.6	622.2	521.2	100.95	6.164	
9,800.0	7,084.7	9,935.7	7,084.7	52.7	54.7	-90.00	-2,570.5	976.1	622.0	517.4	104.60	5.947	
9,900.0	7,084.7	10,035.7	7,084.7	54.5	56.5	-90.00	-2,670.5	975.5	621.9	513.6	108.26	5.744	
10,000.0	7,084.7	10,135.7	7,084.7	56.3	58.2	-90.00	-2,770.5	975.0	621.8	509.8	111.94	5.554	
10,100.0	7,084.7	10,235.7	7,084.7	58.2	60.0	-90.00	-2,870.5	974.4	621.6	506.0	115.63	5.376	
10,200.0	7,084.7	10,335.7	7,084.7	60.0	61.8	-90.00	-2,970.5	973.9	621.5	502.1	119.33	5.208	
10,300.0	7,084.7	10,435.7	7,084.7	61.9	63.6	-90.00	-3,070.5	973.3	621.3	498.3	123.04	5.050	
10,400.0	7,084.7	10,535.7	7,084.7	63.7	65.4	-90.00	-3,170.5	972.8	621.2	494.4	126.75	4.901	
10,500.0	7,084.7	10,635.7	7,084.7	65.6	67.2	-90.00	-3,270.5	972.3	621.0	490.6	130.48	4.760	
10,600.0	7,084.7	10,735.7	7,084.7	67.4	69.0	-90.00	-3,370.5	971.7	620.9	486.7	134.21	4.626	
10,700.0	7,084.7	10,835.7	7,084.7	69.3	70.8	-90.00	-3,470.5	971.2	620.7	482.8	137.94	4.500	
10,800.0	7,084.7	10,935.7	7,084.7	71.2	72.6	-90.00	-3,570.5	970.6	620.6	478.9	141.68	4.380	
10,900.0	7,084.7	11,035.7	7,084.7	73.0	74.4	-90.00	-3,670.5	970.1	620.5	475.0	145.43	4.266	
11,000.0	7,084.7	11,135.7	7,084.7	74.9	76.2	-90.00	-3,770.5	969.5	620.3	471.1	149.18	4.158	
11,100.0	7,084.7	11,235.7	7,084.7	76.8	78.1	-90.00	-3,870.5	969.0	620.2	467.2	152.94	4.055	
11,200.0	7,084.7	11,335.7	7,084.7	78.7	79.9	-90.00	-3,970.5	968.4	620.0	463.3	156.70	3.957	
11,300.0	7,084.7	11,435.7	7,084.7	80.5	81.8	-90.00	-4,070.5	967.9	619.9	459.4	160.47	3.863	
11,400.0	7,084.7	11,535.7	7,084.7	82.4	83.6	-90.00	-4,170.5	967.3	619.7	455.5	164.23	3.773	
11,500.0	7,084.7	11,635.7	7,084.7	84.3	85.5	-90.00	-4,270.5	966.8	619.6	451.6	168.01	3.688	
11,600.0	7,084.7	11,735.7	7,084.7	86.2	87.3	-90.00	-4,370.5	966.2	619.4	447.7	171.78	3.606	
11,700.0	7,084.7	11,835.7	7,084.7	88.1	89.2	-90.00	-4,470.5	965.7	619.3	443.7	175.56	3.528	
11,775.9	7,084.7	11,911.6	7,084.7	89.2	90.6	-90.00	-4,546.4	965.3	619.2	441.0	178.16	3.476	

Gustafson Pad Sec.31-T7N-R65W - Gustafson EF 31-373HC - Wellbore #1 - Plan #1 (12-16-13)												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	92.12	-1.1	29.5	29.5				
100.0	100.0	100.0	100.0	0.1	0.1	92.12	-1.1	29.5	29.5	29.3	0.22	131.172	
200.0	200.0	200.0	200.0	0.3	0.3	92.12	-1.1	29.5	29.5	28.8	0.67	43.724	
300.0	300.0	300.0	300.0	0.6	0.6	92.12	-1.1	29.5	29.5	28.4	1.12	26.234	
400.0	400.0	400.0	400.0	0.8	0.8	92.12	-1.1	29.5	29.5	27.9	1.57	18.739	
500.0	500.0	500.0	500.0	1.0	1.0	92.12	-1.1	29.5	29.5	27.5	2.02	14.575	
600.0	600.0	600.0	600.0	1.2	1.2	92.12	-1.1	29.5	29.5	27.0	2.47	11.925	
700.0	700.0	700.0	700.0	1.5	1.5	92.12	-1.1	29.5	29.5	26.6	2.92	10.090	
800.0	800.0	800.0	800.0	1.7	1.7	92.12	-1.1	29.5	29.5	26.1	3.37	8.745	
900.0	900.0	900.0	900.0	1.9	1.9	92.12	-1.1	29.5	29.5	25.7	3.82	7.716	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	92.12	-1.1	29.5	29.5	25.2	4.27	6.904	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	92.12	-1.1	29.5	29.5	24.8	4.72	6.246	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	92.12	-1.1	29.5	29.5	24.3	5.17	5.703	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	92.12	-1.1	29.5	29.5	23.9	5.62	5.247	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	92.12	-1.1	29.5	29.5	23.4	6.07	4.858	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	92.12	-1.1	29.5	29.5	23.0	6.52	4.523	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	92.12	-1.1	29.5	29.5	22.5	6.97	4.231	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	92.12	-1.1	29.5	29.5	22.1	7.42	3.975	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	92.12	-1.1	29.5	29.5	21.6	7.87	3.748	
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	92.12	-1.1	29.5	29.5	21.2	8.32	3.545	
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	92.12	-1.1	29.5	29.5	20.7	8.77	3.363	
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	92.12	-1.1	29.5	29.5	20.3	9.22	3.199	
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	92.12	-1.1	29.5	29.5	19.8	9.66	3.051	
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	92.12	-1.1	29.5	29.5	19.4	10.11	2.915	
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	92.12	-1.1	29.5	29.5	18.9	10.56	2.791	
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	92.12	-1.1	29.5	29.5	18.5	11.01	2.677	
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	92.12	-1.1	29.5	29.5	18.0	11.46	2.572	
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	92.12	-1.1	29.5	29.5	17.6	11.91	2.475	
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	92.12	-1.1	29.5	29.5	17.1	12.36	2.385	
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	92.12	-1.1	29.5	29.5	16.7	12.81	2.301	
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	92.12	-1.1	29.5	29.5	16.2	13.26	2.223	
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	92.12	-1.1	29.5	29.5	15.8	13.71	2.150	
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	92.12	-1.1	29.5	29.5	15.3	14.16	2.082	
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	92.12	-1.1	29.5	29.5	14.9	14.61	2.018	
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	92.12	-1.1	29.5	29.5	14.4	15.06	1.958	
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	92.12	-1.1	29.5	29.5	14.0	15.51	1.901	
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	92.12	-1.1	29.5	29.5	13.5	15.96	1.847	
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	92.12	-1.1	29.5	29.5	13.1	16.41	1.797	
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	92.12	-1.1	29.5	29.5	12.6	16.86	1.749	
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	92.12	-1.1	29.5	29.5	12.2	17.31	1.704	
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	92.12	-1.1	29.5	29.5	11.7	17.76	1.660	
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	92.12	-1.1	29.5	29.5	11.3	18.21	1.619	
4,200.0	4,200.0	4,200.0	4,200.0	9.3	9.3	92.12	-1.1	29.5	29.5	10.8	18.66	1.580	
4,300.0	4,300.0	4,300.0	4,300.0	9.6	9.6	92.12	-1.1	29.5	29.5	10.4	19.11	1.543	
4,400.0	4,400.0	4,400.0	4,400.0	9.8	9.8	92.12	-1.1	29.5	29.5	9.9	19.55	1.508	
4,500.0	4,500.0	4,500.0	4,500.0	10.0	10.0	92.12	-1.1	29.5	29.5	9.5	20.00	1.474 Level 3	
4,600.0	4,600.0	4,600.0	4,600.0	10.2	10.2	92.12	-1.1	29.5	29.5	9.0	20.45	1.441 Level 3	
4,700.0	4,700.0	4,700.0	4,700.0	10.5	10.5	92.12	-1.1	29.5	29.5	8.6	20.90	1.410 Level 3	
4,800.0	4,800.0	4,800.0	4,800.0	10.7	10.7	92.12	-1.1	29.5	29.5	8.1	21.35	1.381 Level 3	
4,900.0	4,900.0	4,900.0	4,900.0	10.9	10.9	92.12	-1.1	29.5	29.5	7.7	21.80	1.352 Level 3	
5,000.0	5,000.0	5,000.0	5,000.0	11.1	11.1	92.12	-1.1	29.5	29.5	7.2	22.25	1.325 Level 3	
5,100.0	5,100.0	5,100.0	5,100.0	11.4	11.4	92.12	-1.1	29.5	29.5	6.8	22.70	1.299 Level 3	

Company:	Great Western	Local Co-ordinate Reference:	Well Gustafson EF 31-374HN
Project:	SEC.31-T7N-R65W	TVD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Reference Site:	Gustafson Pad Sec.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gustafson EF 31-374HN	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 (12-16-13)	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
5,200.0	5,200.0	5,200.0	5,200.0	11.6	11.6	92.12	-1.1	29.5	29.5	6.3	23.15	1.274	Level 3, CC, ES, SF
5,300.0	5,300.0	5,299.1	5,299.1	11.8	11.8	90.44	-0.2	30.9	31.0	7.4	23.59	1.313	Level 3
5,400.0	5,400.0	5,398.0	5,397.8	12.0	12.0	86.27	2.3	35.4	35.5	11.5	24.03	1.479	Level 3
5,500.0	5,500.0	5,496.3	5,495.8	12.2	12.2	81.32	6.5	42.7	43.4	19.0	24.46	1.776	
5,600.0	5,600.0	5,594.2	5,593.0	12.5	12.4	40.44	12.4	52.9	53.7	28.9	24.87	2.161	
5,700.0	5,699.8	5,691.8	5,689.4	12.7	12.7	39.86	19.9	66.0	63.5	38.3	25.25	2.516	
5,800.0	5,799.1	5,789.2	5,785.0	12.9	12.9	41.23	29.0	81.8	72.6	47.0	25.60	2.835	
5,900.0	5,897.6	5,886.3	5,879.7	13.1	13.1	43.91	39.6	100.4	81.1	55.1	25.94	3.124	
6,000.0	5,995.1	5,983.1	5,973.4	13.4	13.4	47.55	51.8	121.7	89.2	62.9	26.30	3.392	
6,100.0	6,091.4	6,079.7	6,066.0	13.6	13.7	51.93	65.6	145.7	97.4	70.7	26.70	3.646	
6,200.0	6,186.1	6,176.0	6,157.3	13.9	14.0	56.84	80.9	172.3	105.9	78.7	27.19	3.896	
6,300.0	6,279.0	6,272.1	6,247.2	14.2	14.4	62.09	97.6	201.4	115.3	87.5	27.81	4.148	
6,400.0	6,369.8	6,367.9	6,335.8	14.6	14.8	67.51	115.7	233.1	126.0	97.4	28.58	4.409	
6,500.0	6,458.3	6,463.3	6,422.8	15.0	15.2	72.89	135.3	267.2	138.2	108.7	29.51	4.684	
6,600.0	6,545.9	6,559.1	6,508.6	15.5	15.7	68.99	156.3	303.9	151.3	120.8	30.46	4.967	
6,700.0	6,638.5	6,655.3	6,593.5	15.9	16.3	37.88	178.9	343.3	157.2	126.6	30.67	5.126	
6,800.0	6,732.7	6,747.8	6,673.7	16.2	16.9	-8.04	201.9	383.3	158.4	128.2	30.22	5.241	
6,900.0	6,823.5	6,833.4	6,747.5	16.4	17.5	-45.74	223.4	420.8	165.2	135.1	30.07	5.494	
7,000.0	6,906.4	6,916.1	6,819.7	16.5	18.0	-71.34	239.6	457.5	190.2	159.6	30.56	6.223	
7,100.0	6,977.2	7,013.3	6,906.3	16.6	18.5	-88.89	239.2	501.4	231.2	200.3	30.89	7.484	
7,200.0	7,032.1	7,136.9	7,012.7	16.7	19.1	-101.75	208.3	555.1	279.7	249.2	30.55	9.155	
7,300.0	7,068.3	7,310.8	7,140.9	16.9	19.7	-111.87	111.9	619.6	325.8	296.3	29.56	11.022	
7,400.0	7,084.1	7,564.6	7,247.2	17.2	20.4	-118.15	-108.4	672.4	354.3	325.3	28.92	12.250	
7,500.0	7,084.7	7,725.5	7,255.7	17.8	20.9	-118.67	-268.6	675.9	356.4	326.6	29.78	11.968	
7,600.0	7,084.7	7,825.5	7,255.7	18.5	21.5	-118.68	-368.6	675.5	356.3	325.3	31.04	11.479	
7,700.0	7,084.7	7,925.5	7,255.7	19.3	22.1	-118.69	-468.6	675.0	356.2	323.6	32.62	10.921	
7,800.0	7,084.7	8,025.5	7,255.7	20.4	23.0	-118.69	-568.6	674.5	356.2	321.7	34.47	10.332	
7,900.0	7,084.7	8,125.5	7,255.7	21.5	23.9	-118.70	-668.6	674.0	356.1	319.6	36.56	9.742	
8,000.0	7,084.7	8,225.5	7,255.7	22.8	25.0	-118.70	-768.6	673.5	356.1	317.2	38.83	9.169	
8,100.0	7,084.7	8,325.5	7,255.7	24.1	26.2	-118.71	-868.6	673.1	356.0	314.7	41.27	8.626	
8,200.0	7,084.7	8,425.5	7,255.7	25.5	27.5	-118.71	-968.6	672.6	355.9	312.1	43.84	8.118	
8,300.0	7,084.7	8,525.5	7,255.7	27.0	28.8	-118.72	-1,068.6	672.1	355.9	309.3	46.53	7.648	
8,400.0	7,084.7	8,625.5	7,255.7	28.5	30.3	-118.73	-1,168.6	671.6	355.8	306.5	49.31	7.216	
8,500.0	7,084.7	8,725.5	7,255.7	30.1	31.7	-118.73	-1,268.6	671.2	355.7	303.6	52.17	6.819	
8,600.0	7,084.7	8,825.5	7,255.7	31.7	33.3	-118.74	-1,368.6	670.7	355.7	300.6	55.09	6.456	
8,700.0	7,084.7	8,925.5	7,255.7	33.3	34.8	-118.74	-1,468.6	670.2	355.6	297.5	58.07	6.123	
8,800.0	7,084.7	9,025.5	7,255.7	35.0	36.4	-118.75	-1,568.6	669.7	355.5	294.4	61.10	5.819	
8,900.0	7,084.7	9,125.5	7,255.7	36.7	38.0	-118.76	-1,668.6	669.3	355.5	291.3	64.17	5.539	
9,000.0	7,084.7	9,225.5	7,255.7	38.4	39.7	-118.76	-1,768.6	668.8	355.4	288.1	67.27	5.283	
9,100.0	7,084.7	9,325.5	7,255.7	40.2	41.4	-118.77	-1,868.6	668.3	355.3	284.9	70.41	5.046	
9,200.0	7,084.7	9,425.5	7,255.7	41.9	43.1	-118.77	-1,968.6	667.8	355.3	281.7	73.57	4.829	
9,300.0	7,084.7	9,525.5	7,255.7	43.7	44.8	-118.78	-2,068.6	667.4	355.2	278.4	76.76	4.627	
9,400.0	7,084.7	9,625.5	7,255.7	45.5	46.5	-118.78	-2,168.6	666.9	355.1	275.2	79.97	4.441	
9,500.0	7,084.7	9,725.5	7,255.7	47.3	48.3	-118.79	-2,268.6	666.4	355.1	271.9	83.19	4.268	
9,600.0	7,084.7	9,825.5	7,255.7	49.1	50.0	-118.80	-2,368.6	665.9	355.0	268.6	86.43	4.107	
9,700.0	7,084.7	9,925.5	7,255.7	50.9	51.8	-118.80	-2,468.6	665.5	354.9	265.2	89.69	3.957	
9,800.0	7,084.7	10,025.5	7,255.7	52.7	53.6	-118.81	-2,568.6	665.0	354.9	261.9	92.96	3.817	
9,900.0	7,084.7	10,125.5	7,255.7	54.5	55.4	-118.81	-2,668.6	664.5	354.8	258.6	96.24	3.687	
10,000.0	7,084.7	10,225.5	7,255.7	56.3	57.2	-118.82	-2,768.6	664.0	354.7	255.2	99.53	3.564	
10,100.0	7,084.7	10,325.5	7,255.7	58.2	59.0	-118.83	-2,868.6	663.5	354.7	251.8	102.83	3.449	
10,200.0	7,084.7	10,425.5	7,255.7	60.0	60.8	-118.83	-2,968.6	663.1	354.6	248.5	106.13	3.341	
10,300.0	7,084.7	10,525.5	7,255.7	61.9	62.6	-118.84	-3,068.6	662.6	354.5	245.1	109.45	3.239	

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 Gustafson EF 31-374HN
Project:	SEC.31-T7N-R65W	TVD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Reference Site:	Gustafson Pad Sec.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gustafson EF 31-374HN	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 (12-16-13)	Offset TVD Reference:	Offset Datum

Offset Design Gustafson Pad Sec.31-T7N-R65W - Gustafson EF 31-373HC - Wellbore #1 - Plan #1 (12-16-13)												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	7,084.7	10,625.5	7,255.7	63.7	64.4	-118.84	-3,168.6	662.1	354.5	241.7	112.77	3.143	
10,500.0	7,084.7	10,725.5	7,255.7	65.6	66.3	-118.85	-3,268.6	661.6	354.4	238.3	116.10	3.053	
10,600.0	7,084.7	10,825.5	7,255.7	67.4	68.1	-118.86	-3,368.6	661.2	354.3	234.9	119.43	2.967	
10,700.0	7,084.7	10,925.5	7,255.7	69.3	69.9	-118.86	-3,468.6	660.7	354.3	231.5	122.77	2.886	
10,800.0	7,084.7	11,025.5	7,255.7	71.2	71.8	-118.87	-3,568.6	660.2	354.2	228.1	126.12	2.809	
10,900.0	7,084.7	11,125.5	7,255.7	73.0	73.6	-118.87	-3,668.6	659.7	354.1	224.7	129.46	2.735	
11,000.0	7,084.7	11,225.5	7,255.7	74.9	75.5	-118.88	-3,768.6	659.3	354.1	221.3	132.82	2.666	
11,100.0	7,084.7	11,325.5	7,255.7	76.8	77.3	-118.88	-3,868.6	658.8	354.0	217.8	136.17	2.600	
11,200.0	7,084.7	11,425.5	7,255.7	78.7	79.2	-118.89	-3,968.6	658.3	353.9	214.4	139.53	2.537	
11,300.0	7,084.7	11,525.5	7,255.7	80.5	81.1	-118.90	-4,068.6	657.8	353.9	211.0	142.90	2.476	
11,400.0	7,084.7	11,625.5	7,255.7	82.4	82.9	-118.90	-4,168.6	657.4	353.8	207.5	146.26	2.419	
11,500.0	7,084.7	11,725.5	7,255.7	84.3	84.8	-118.91	-4,268.6	656.9	353.7	204.1	149.63	2.364	
11,600.0	7,084.7	11,825.5	7,255.7	86.2	86.7	-118.91	-4,368.6	656.4	353.7	200.7	153.00	2.312	
11,700.0	7,084.7	11,925.5	7,255.7	88.1	88.5	-118.92	-4,468.6	655.9	353.6	197.2	156.37	2.261	
11,775.9	7,084.7	12,001.4	7,255.7	89.2	90.0	-118.92	-4,544.5	655.6	353.6	194.9	158.68	2.228	

Company:	Great Western	Local Co-ordinate Reference:	Well Gustafson EF 31-374HN
Project:	SEC.31-T7N-R65W	TVD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Reference Site:	Gustafson Pad Sec.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gustafson EF 31-374HN	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 (12-16-13)	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	-88.63	0.7	-30.0	30.0					
100.0	100.0	100.0	100.0	0.1	0.1	-88.63	0.7	-30.0	30.0	29.8	0.22	133.594		
200.0	200.0	200.0	200.0	0.3	0.3	-88.63	0.7	-30.0	30.0	29.4	0.67	44.531		
300.0	300.0	300.0	300.0	0.6	0.6	-88.63	0.7	-30.0	30.0	28.9	1.12	26.719		
400.0	400.0	400.0	400.0	0.8	0.8	-88.63	0.7	-30.0	30.0	28.5	1.57	19.085		
500.0	500.0	500.0	500.0	1.0	1.0	-88.63	0.7	-30.0	30.0	28.0	2.02	14.844		
600.0	600.0	600.0	600.0	1.2	1.2	-88.63	0.7	-30.0	30.0	27.6	2.47	12.145		
700.0	700.0	700.0	700.0	1.5	1.5	-88.63	0.7	-30.0	30.0	27.1	2.92	10.276		
800.0	800.0	800.0	800.0	1.7	1.7	-88.63	0.7	-30.0	30.0	26.7	3.37	8.906		
900.0	900.0	900.0	900.0	1.9	1.9	-88.63	0.7	-30.0	30.0	26.2	3.82	7.858		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-88.63	0.7	-30.0	30.0	25.8	4.27	7.031		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-88.63	0.7	-30.0	30.0	25.3	4.72	6.362		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-88.63	0.7	-30.0	30.0	24.9	5.17	5.808		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-88.63	0.7	-30.0	30.0	24.4	5.62	5.344		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-88.63	0.7	-30.0	30.0	24.0	6.07	4.948		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-88.63	0.7	-30.0	30.0	23.5	6.52	4.607		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	-88.63	0.7	-30.0	30.0	23.1	6.97	4.309		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	-88.63	0.7	-30.0	30.0	22.6	7.42	4.048		
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-88.63	0.7	-30.0	30.0	22.2	7.87	3.817		
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	-88.63	0.7	-30.0	30.0	21.7	8.32	3.611		
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	-88.63	0.7	-30.0	30.0	21.3	8.77	3.425		
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	-88.63	0.7	-30.0	30.0	20.8	9.22	3.258		
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	-88.63	0.7	-30.0	30.0	20.4	9.66	3.107		
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	-88.63	0.7	-30.0	30.0	19.9	10.11	2.969		
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	-88.63	0.7	-30.0	30.0	19.5	10.56	2.842		
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	-88.63	0.7	-30.0	30.0	19.0	11.01	2.726		
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	-88.63	0.7	-30.0	30.0	18.6	11.46	2.619		
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	-88.63	0.7	-30.0	30.0	18.1	11.91	2.521		
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	-88.63	0.7	-30.0	30.0	17.7	12.36	2.429		
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	-88.63	0.7	-30.0	30.0	17.2	12.81	2.344		
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	-88.63	0.7	-30.0	30.0	16.8	13.26	2.264		
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	-88.63	0.7	-30.0	30.0	16.3	13.71	2.190		
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	-88.63	0.7	-30.0	30.0	15.9	14.16	2.121		
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	-88.63	0.7	-30.0	30.0	15.4	14.61	2.055		
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	-88.63	0.7	-30.0	30.0	15.0	15.06	1.994		
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	-88.63	0.7	-30.0	30.0	14.5	15.51	1.936		
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	-88.63	0.7	-30.0	30.0	14.1	15.96	1.882		
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	-88.63	0.7	-30.0	30.0	13.6	16.41	1.830		
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	-88.63	0.7	-30.0	30.0	13.2	16.86	1.781		
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	-88.63	0.7	-30.0	30.0	12.7	17.31	1.735		
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	-88.63	0.7	-30.0	30.0	12.3	17.76	1.691		
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	-88.63	0.7	-30.0	30.0	11.8	18.21	1.649		
4,200.0	4,200.0	4,200.0	4,200.0	9.3	9.3	-88.63	0.7	-30.0	30.0	11.4	18.66	1.610		
4,300.0	4,300.0	4,300.0	4,300.0	9.6	9.6	-88.63	0.7	-30.0	30.0	10.9	19.11	1.572		
4,400.0	4,400.0	4,400.0	4,400.0	9.8	9.8	-88.63	0.7	-30.0	30.0	10.5	19.55	1.536		
4,500.0	4,500.0	4,500.0	4,500.0	10.0	10.0	-88.63	0.7	-30.0	30.0	10.0	20.00	1.501		
4,600.0	4,600.0	4,600.0	4,600.0	10.2	10.2	-88.63	0.7	-30.0	30.0	9.6	20.45	1.468 Level 3		
4,700.0	4,700.0	4,700.0	4,700.0	10.5	10.5	-88.63	0.7	-30.0	30.0	9.1	20.90	1.436 Level 3		
4,800.0	4,800.0	4,800.0	4,800.0	10.7	10.7	-88.63	0.7	-30.0	30.0	8.7	21.35	1.406 Level 3		
4,900.0	4,900.0	4,900.0	4,900.0	10.9	10.9	-88.63	0.7	-30.0	30.0	8.2	21.80	1.377 Level 3		
5,000.0	5,000.0	5,000.0	5,000.0	11.1	11.1	-88.63	0.7	-30.0	30.0	7.8	22.25	1.349 Level 3		
5,100.0	5,100.0	5,100.0	5,100.0	11.4	11.4	-88.63	0.7	-30.0	30.0	7.3	22.70	1.323 Level 3		

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 Gustafson EF 31-374HN
Project:	SEC.31-T7N-R65W	TVD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Reference Site:	Gustafson Pad Sec.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gustafson EF 31-374HN	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 (12-16-13)	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	5,200.0	5,200.0	5,200.0	11.6	11.6	-88.63	0.7	-30.0	30.0	6.9	23.15	1.297	Level 3	
5,300.0	5,300.0	5,300.0	5,300.0	11.8	11.8	-88.63	0.7	-30.0	30.0	6.4	23.60	1.272	Level 3	
5,400.0	5,400.0	5,400.0	5,400.0	12.0	12.0	-88.63	0.7	-30.0	30.0	6.0	24.05	1.249	Level 2	
5,500.0	5,500.0	5,500.0	5,500.0	12.2	12.2	-88.63	0.7	-30.0	30.0	5.5	24.50	1.226	Level 2, CC, ES, SF	
5,600.0	5,600.0	5,600.0	5,600.0	12.5	12.5	-127.98	0.7	-30.0	30.9	5.9	24.94	1.238	Level 2	
5,700.0	5,699.8	5,699.8	5,699.8	12.7	12.7	-136.22	0.7	-30.0	35.3	9.9	25.34	1.391	Level 3	
5,800.0	5,799.1	5,798.9	5,798.9	12.9	12.9	-144.88	1.9	-30.5	44.5	18.9	25.68	1.734		
5,900.0	5,897.6	5,897.6	5,897.1	13.1	13.1	-145.38	10.1	-33.9	59.1	33.1	25.98	2.274		
6,000.0	5,995.1	5,995.0	5,993.0	13.4	13.4	-141.44	25.8	-40.4	78.6	52.3	26.29	2.990		
6,100.0	6,091.4	6,090.2	6,085.0	13.6	13.6	-136.18	48.4	-49.7	103.6	77.0	26.64	3.889		
6,200.0	6,186.1	6,182.5	6,172.0	13.9	13.8	-130.96	77.0	-61.5	134.5	107.4	27.05	4.972		
6,300.0	6,279.0	6,271.2	6,252.9	14.2	14.1	-126.24	110.4	-75.3	171.4	143.8	27.54	6.223		
6,400.0	6,369.8	6,356.2	6,327.6	14.6	14.4	-122.07	147.8	-90.8	214.0	185.9	28.10	7.616		
6,500.0	6,458.3	6,444.4	6,403.7	15.0	14.7	-119.00	189.1	-107.8	260.6	231.8	28.76	9.062		
6,600.0	6,545.9	6,531.3	6,479.1	15.5	15.1	-130.13	228.8	-124.7	309.5	280.3	29.19	10.604		
6,700.0	6,638.5	6,616.5	6,557.7	15.9	15.4	-164.70	256.0	-142.3	361.4	332.0	29.37	12.305		
6,800.0	6,732.7	6,702.6	6,641.0	16.2	15.7	153.97	267.2	-161.1	414.6	384.9	29.71	13.954		
6,900.0	6,823.5	6,792.6	6,728.3	16.4	15.9	125.77	261.0	-180.8	466.8	436.6	30.17	15.471		
7,000.0	6,906.4	6,889.6	6,819.0	16.5	15.9	109.79	234.1	-201.3	515.7	485.1	30.60	16.854		
7,100.0	6,977.2	6,997.2	6,910.2	16.6	16.0	100.40	181.4	-222.0	558.7	527.8	30.86	18.102		
7,200.0	7,032.1	7,118.4	6,994.6	16.7	15.9	94.81	96.9	-241.3	593.1	562.1	31.04	19.111		
7,300.0	7,068.3	7,253.7	7,058.2	16.9	15.9	91.64	-20.8	-256.0	616.3	584.9	31.39	19.634		
7,400.0	7,084.1	7,397.8	7,084.6	17.2	16.3	90.11	-161.8	-262.3	625.8	593.6	32.24	19.409		
7,500.0	7,084.7	7,501.3	7,084.7	17.8	16.9	90.00	-265.2	-262.7	625.9	592.7	33.24	18.832		
7,600.0	7,084.7	7,601.3	7,084.7	18.5	17.7	90.00	-365.2	-263.0	625.8	591.1	34.74	18.013		
7,700.0	7,084.7	7,701.3	7,084.7	19.3	18.6	90.00	-465.2	-263.3	625.7	589.2	36.59	17.100		
7,800.0	7,084.7	7,801.3	7,084.7	20.4	19.6	90.00	-565.2	-263.6	625.7	586.9	38.74	16.151		
7,900.0	7,084.7	7,901.3	7,084.7	21.5	20.8	90.00	-665.2	-263.9	625.6	584.4	41.13	15.209		
8,000.0	7,084.7	8,001.3	7,084.7	22.8	22.1	90.00	-765.2	-264.2	625.5	581.7	43.73	14.303		
8,100.0	7,084.7	8,101.3	7,084.7	24.1	23.5	90.00	-865.2	-264.5	625.4	578.9	46.50	13.448		
8,200.0	7,084.7	8,201.3	7,084.7	25.5	24.9	90.00	-965.2	-264.8	625.3	575.9	49.42	12.652		
8,300.0	7,084.7	8,301.3	7,084.7	27.0	26.4	90.00	-1,065.2	-265.1	625.2	572.7	52.46	11.918		
8,400.0	7,084.7	8,401.3	7,084.7	28.5	28.0	90.00	-1,165.2	-265.4	625.1	569.5	55.59	11.244		
8,500.0	7,084.7	8,501.3	7,084.7	30.1	29.6	90.00	-1,265.2	-265.7	625.0	566.2	58.81	10.627		
8,600.0	7,084.7	8,601.3	7,084.7	31.7	31.2	90.00	-1,365.2	-266.1	624.9	562.8	62.11	10.062		
8,700.0	7,084.7	8,701.3	7,084.7	33.3	32.9	90.00	-1,465.2	-266.4	624.8	559.4	65.46	9.545		
8,800.0	7,084.7	8,801.3	7,084.7	35.0	34.6	90.00	-1,565.2	-266.7	624.7	555.9	68.86	9.072		
8,900.0	7,084.7	8,901.3	7,084.7	36.7	36.3	90.00	-1,665.2	-267.0	624.6	552.3	72.31	8.638		
9,000.0	7,084.7	9,001.3	7,084.7	38.4	38.1	90.00	-1,765.2	-267.3	624.5	548.7	75.79	8.240		
9,100.0	7,084.7	9,101.3	7,084.7	40.2	39.8	90.00	-1,865.2	-267.6	624.4	545.1	79.31	7.873		
9,200.0	7,084.7	9,201.3	7,084.7	41.9	41.6	90.00	-1,965.2	-267.9	624.3	541.5	82.86	7.535		
9,300.0	7,084.7	9,301.3	7,084.7	43.7	43.4	90.00	-2,065.2	-268.2	624.2	537.8	86.44	7.222		
9,400.0	7,084.7	9,401.3	7,084.7	45.5	45.1	90.00	-2,165.2	-268.5	624.2	534.1	90.03	6.933		
9,500.0	7,084.7	9,501.3	7,084.7	47.3	46.9	90.00	-2,265.2	-268.8	624.1	530.4	93.65	6.664		
9,600.0	7,084.7	9,601.3	7,084.7	49.1	48.8	90.00	-2,365.2	-269.1	624.0	526.7	97.28	6.414		
9,700.0	7,084.7	9,701.3	7,084.7	50.9	50.6	90.00	-2,465.2	-269.4	623.9	522.9	100.93	6.181		
9,800.0	7,084.7	9,801.3	7,084.7	52.7	52.4	90.00	-2,565.2	-269.7	623.8	519.2	104.59	5.964		
9,900.0	7,084.7	9,901.3	7,084.7	54.5	54.2	90.00	-2,665.2	-270.0	623.7	515.4	108.27	5.761		
10,000.0	7,084.7	10,001.3	7,084.7	56.3	56.1	90.00	-2,765.2	-270.4	623.6	511.6	111.95	5.570		
10,100.0	7,084.7	10,101.3	7,084.7	58.2	57.9	90.00	-2,865.2	-270.7	623.5	507.8	115.65	5.391		
10,200.0	7,084.7	10,201.3	7,084.7	60.0	59.8	90.00	-2,965.2	-271.0	623.4	504.0	119.36	5.223		
10,300.0	7,084.7	10,301.3	7,084.7	61.9	61.6	90.00	-3,065.2	-271.3	623.3	500.2	123.07	5.065		

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 Gustafson EF 31-374HN
Project:	SEC.31-T7N-R65W	TVD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Reference Site:	Gustafson Pad Sec.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gustafson EF 31-374HN	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 (12-16-13)	Offset TVD Reference:	Offset Datum

Offset Design Gustafson Pad Sec.31-T7N-R65W - Gustafson EF 31-377HN - Wellbore #1 - Plan #1 (12-16-13)												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (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
10,400.0	7,084.7	10,401.3	7,084.7	63.7	63.5	90.00	-3,165.2	-271.6	623.2	496.4	126.79	4.915	
10,500.0	7,084.7	10,501.3	7,084.7	65.6	65.4	90.00	-3,265.2	-271.9	623.1	492.6	130.52	4.774	
10,600.0	7,084.7	10,601.3	7,084.7	67.4	67.2	90.00	-3,365.2	-272.2	623.0	488.8	134.26	4.640	
10,700.0	7,084.7	10,701.3	7,084.7	69.3	69.1	90.00	-3,465.2	-272.5	622.9	484.9	138.00	4.514	
10,800.0	7,084.7	10,801.3	7,084.7	71.2	71.0	90.00	-3,565.2	-272.8	622.8	481.1	141.75	4.394	
10,900.0	7,084.7	10,901.3	7,084.7	73.0	72.8	90.00	-3,665.2	-273.1	622.8	477.2	145.50	4.280	
11,000.0	7,084.7	11,001.3	7,084.7	74.9	74.7	90.00	-3,765.2	-273.4	622.7	473.4	149.26	4.172	
11,100.0	7,084.7	11,101.3	7,084.7	76.8	76.6	90.00	-3,865.2	-273.7	622.6	469.5	153.02	4.068	
11,200.0	7,084.7	11,201.3	7,084.7	78.7	78.5	90.00	-3,965.2	-274.0	622.5	465.7	156.79	3.970	
11,300.0	7,084.7	11,301.3	7,084.7	80.5	80.4	90.00	-4,065.2	-274.4	622.4	461.8	160.56	3.876	
11,400.0	7,084.7	11,401.3	7,084.7	82.4	82.2	90.00	-4,165.2	-274.7	622.3	458.0	164.33	3.787	
11,500.0	7,084.7	11,501.3	7,084.7	84.3	84.1	90.00	-4,265.2	-275.0	622.2	454.1	168.11	3.701	
11,600.0	7,084.7	11,601.3	7,084.7	86.2	86.0	90.00	-4,365.2	-275.3	622.1	450.2	171.89	3.619	
11,700.0	7,084.7	11,701.3	7,084.7	88.1	87.9	90.00	-4,465.2	-275.6	622.0	446.3	175.66	3.541	
11,751.7	7,084.7	11,753.0	7,084.7	88.9	88.7	90.00	-4,516.9	-275.7	622.0	444.7	177.25	3.509	
11,775.9	7,084.7	11,762.7	7,084.7	89.2	88.8	90.00	-4,526.7	-275.8	622.1	444.3	177.77	3.499	

Company:	Great Western	Local Co-ordinate Reference:	Well Gustafson EF 31-374HN
Project:	SEC.31-T7N-R65W	TVD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Reference Site:	Gustafson Pad Sec.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gustafson EF 31-374HN	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 (12-16-13)	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	-89.31	0.7	-60.3	60.3					
100.0	100.0	100.0	100.0	0.1	0.1	-89.31	0.7	-60.3	60.3	60.1	0.22	268.367		
200.0	200.0	200.0	200.0	0.3	0.3	-89.31	0.7	-60.3	60.3	59.6	0.67	89.456		
300.0	300.0	300.0	300.0	0.6	0.6	-89.31	0.7	-60.3	60.3	59.2	1.12	53.673		
400.0	400.0	400.0	400.0	0.8	0.8	-89.31	0.7	-60.3	60.3	58.7	1.57	38.338		
500.0	500.0	500.0	500.0	1.0	1.0	-89.31	0.7	-60.3	60.3	58.3	2.02	29.819		
600.0	600.0	600.0	600.0	1.2	1.2	-89.31	0.7	-60.3	60.3	57.8	2.47	24.397		
700.0	700.0	700.0	700.0	1.5	1.5	-89.31	0.7	-60.3	60.3	57.4	2.92	20.644		
800.0	800.0	800.0	800.0	1.7	1.7	-89.31	0.7	-60.3	60.3	56.9	3.37	17.891		
900.0	900.0	900.0	900.0	1.9	1.9	-89.31	0.7	-60.3	60.3	56.5	3.82	15.786		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-89.31	0.7	-60.3	60.3	56.0	4.27	14.125		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-89.31	0.7	-60.3	60.3	55.6	4.72	12.779		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-89.31	0.7	-60.3	60.3	55.2	5.17	11.668		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-89.31	0.7	-60.3	60.3	54.7	5.62	10.735		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-89.31	0.7	-60.3	60.3	54.3	6.07	9.940		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-89.31	0.7	-60.3	60.3	53.8	6.52	9.254		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	-89.31	0.7	-60.3	60.3	53.4	6.97	8.657		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	-89.31	0.7	-60.3	60.3	52.9	7.42	8.132		
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-89.31	0.7	-60.3	60.3	52.5	7.87	7.668		
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	-89.31	0.7	-60.3	60.3	52.0	8.32	7.253		
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	-89.31	0.7	-60.3	60.3	51.6	8.77	6.881		
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	-89.31	0.7	-60.3	60.3	51.1	9.22	6.546		
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	-89.31	0.7	-60.3	60.3	50.7	9.66	6.241		
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	-89.31	0.7	-60.3	60.3	50.2	10.11	5.964		
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	-89.31	0.7	-60.3	60.3	49.8	10.56	5.710		
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	-89.31	0.7	-60.3	60.3	49.3	11.01	5.477		
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	-89.31	0.7	-60.3	60.3	48.9	11.46	5.262		
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	-89.31	0.7	-60.3	60.3	48.4	11.91	5.064		
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	-89.31	0.7	-60.3	60.3	48.0	12.36	4.879		
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	-89.31	0.7	-60.3	60.3	47.5	12.81	4.708		
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	-89.31	0.7	-60.3	60.3	47.1	13.26	4.549		
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	-89.31	0.7	-60.3	60.3	46.6	13.71	4.399		
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	-89.31	0.7	-60.3	60.3	46.2	14.16	4.260		
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	-89.31	0.7	-60.3	60.3	45.7	14.61	4.129		
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	-89.31	0.7	-60.3	60.3	45.3	15.06	4.005		
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	-89.31	0.7	-60.3	60.3	44.8	15.51	3.889		
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	-89.31	0.7	-60.3	60.3	44.4	15.96	3.780		
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	-89.31	0.7	-60.3	60.3	43.9	16.41	3.676		
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	-89.31	0.7	-60.3	60.3	43.5	16.86	3.578		
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	-89.31	0.7	-60.3	60.3	43.0	17.31	3.485		
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	-89.31	0.7	-60.3	60.3	42.6	17.76	3.397		
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	-89.31	0.7	-60.3	60.3	42.1	18.21	3.313		
4,200.0	4,200.0	4,200.0	4,200.0	9.3	9.3	-89.31	0.7	-60.3	60.3	41.7	18.66	3.233		
4,300.0	4,300.0	4,300.0	4,300.0	9.6	9.6	-89.31	0.7	-60.3	60.3	41.2	19.11	3.157		
4,400.0	4,400.0	4,400.0	4,400.0	9.8	9.8	-89.31	0.7	-60.3	60.3	40.8	19.55	3.085		
4,500.0	4,500.0	4,500.0	4,500.0	10.0	10.0	-89.31	0.7	-60.3	60.3	40.3	20.00	3.015		
4,600.0	4,600.0	4,600.0	4,600.0	10.2	10.2	-89.31	0.7	-60.3	60.3	39.9	20.45	2.949		
4,700.0	4,700.0	4,700.0	4,700.0	10.5	10.5	-89.31	0.7	-60.3	60.3	39.4	20.90	2.886		
4,800.0	4,800.0	4,800.0	4,800.0	10.7	10.7	-89.31	0.7	-60.3	60.3	39.0	21.35	2.825		
4,900.0	4,900.0	4,900.0	4,900.0	10.9	10.9	-89.31	0.7	-60.3	60.3	38.5	21.80	2.767		
5,000.0	5,000.0	5,000.0	5,000.0	11.1	11.1	-89.31	0.7	-60.3	60.3	38.1	22.25	2.711		
5,100.0	5,100.0	5,100.0	5,100.0	11.4	11.4	-89.31	0.7	-60.3	60.3	37.6	22.70	2.657		

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 Gustafson EF 31-374HN
Project:	SEC.31-T7N-R65W	TVD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Reference Site:	Gustafson Pad Sec.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gustafson EF 31-374HN	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 (12-16-13)	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	5,200.0	5,200.0	5,200.0	11.6	11.6	-89.31	0.7	-60.3	60.3	37.2	23.15	2.606		
5,300.0	5,300.0	5,300.0	5,300.0	11.8	11.8	-89.31	0.7	-60.3	60.3	36.7	23.60	2.556		
5,400.0	5,400.0	5,400.0	5,400.0	12.0	12.0	-89.31	0.7	-60.3	60.3	36.3	24.05	2.508		
5,500.0	5,500.0	5,500.0	5,500.0	12.2	12.2	-89.31	0.7	-60.3	60.3	35.8	24.50	2.462 CC, ES, SF		
5,600.0	5,600.0	5,598.0	5,598.0	12.5	12.5	-126.60	1.7	-61.6	62.5	37.5	24.93	2.505		
5,700.0	5,699.8	5,694.9	5,694.7	12.7	12.7	-127.26	5.7	-66.6	71.5	46.2	25.33	2.824		
5,800.0	5,799.1	5,790.5	5,789.6	12.9	12.9	-128.15	12.7	-75.2	87.7	62.0	25.70	3.411		
5,900.0	5,897.6	5,884.1	5,881.9	13.1	13.1	-128.92	22.4	-87.3	110.7	84.7	26.04	4.252		
6,000.0	5,995.1	5,975.2	5,970.9	13.4	13.3	-129.41	34.5	-102.4	140.5	114.1	26.36	5.329		
6,100.0	6,091.4	6,063.0	6,055.8	13.6	13.6	-129.62	48.7	-120.2	176.7	150.0	26.66	6.626		
6,200.0	6,186.1	6,147.4	6,136.1	13.9	13.8	-129.55	64.6	-140.0	219.0	192.0	26.96	8.121		
6,300.0	6,279.0	6,227.8	6,211.7	14.2	14.0	-129.25	81.8	-161.5	267.0	239.7	27.27	9.792		
6,400.0	6,369.8	6,300.0	6,278.5	14.6	14.3	-128.67	99.0	-182.9	320.4	292.9	27.58	11.618		
6,500.0	6,458.3	6,376.2	6,347.8	15.0	14.6	-127.98	118.7	-207.6	378.8	350.9	27.96	13.550		
6,600.0	6,545.9	6,444.3	6,408.7	15.5	14.9	-141.91	137.9	-231.5	441.3	413.1	28.19	15.653		
6,700.0	6,638.5	6,508.1	6,464.6	15.9	15.2	-178.82	157.1	-255.4	505.1	476.5	28.65	17.631		
6,800.0	6,732.7	6,569.4	6,517.5	16.2	15.6	139.34	176.4	-279.5	568.9	539.4	29.50	19.287		
6,900.0	6,823.5	6,626.6	6,566.8	16.4	15.9	111.18	194.6	-302.2	631.5	601.1	30.36	20.798		
7,000.0	6,906.4	6,671.6	6,605.5	16.5	16.2	94.27	208.9	-320.0	692.9	661.9	30.97	22.373		
7,100.0	6,977.2	6,701.8	6,631.5	16.6	16.4	82.35	218.5	-332.0	753.1	722.0	31.08	24.228		
7,200.0	7,032.1	6,715.8	6,643.6	16.7	16.5	72.65	222.9	-337.6	811.2	780.7	30.49	26.603		
7,300.0	7,068.3	6,712.9	6,641.1	16.9	16.4	64.34	222.0	-336.4	865.9	836.7	29.20	29.653		
7,400.0	7,084.1	6,693.2	6,624.1	17.2	16.3	57.40	215.7	-328.6	914.9	887.3	27.59	33.160		
7,500.0	7,084.7	6,662.0	6,597.3	17.8	16.1	54.42	205.8	-316.2	960.7	933.6	27.10	35.450		
7,600.0	7,084.7	7,850.6	7,255.7	18.5	20.1	99.86	-364.9	-621.1	998.7	963.8	34.93	28.591		
7,700.0	7,084.7	7,950.6	7,255.7	19.3	20.8	99.86	-464.9	-621.4	998.6	961.9	36.72	27.197		
7,800.0	7,084.7	8,050.6	7,255.7	20.4	21.7	99.86	-564.9	-621.6	998.4	959.6	38.79	25.738		
7,900.0	7,084.7	8,150.6	7,255.7	21.5	22.7	99.86	-664.9	-621.8	998.2	957.1	41.11	24.280		
8,000.0	7,084.7	8,250.6	7,255.7	22.8	23.9	99.87	-764.9	-622.1	998.1	954.4	43.64	22.870		
8,100.0	7,084.7	8,350.6	7,255.7	24.1	25.1	99.87	-864.9	-622.3	997.9	951.6	46.34	21.532		
8,200.0	7,084.7	8,450.6	7,255.7	25.5	26.5	99.87	-964.9	-622.5	997.7	948.6	49.19	20.283		
8,300.0	7,084.7	8,550.6	7,255.7	27.0	27.9	99.87	-1,064.9	-622.8	997.6	945.4	52.16	19.125		
8,400.0	7,084.7	8,650.6	7,255.7	28.5	29.4	99.87	-1,164.9	-623.0	997.4	942.2	55.23	18.059		
8,500.0	7,084.7	8,750.6	7,255.7	30.1	30.9	99.87	-1,264.9	-623.2	997.2	938.9	58.39	17.080		
8,600.0	7,084.7	8,850.6	7,255.7	31.7	32.4	99.88	-1,364.9	-623.5	997.1	935.5	61.61	16.183		
8,700.0	7,084.7	8,950.6	7,255.7	33.3	34.0	99.88	-1,464.9	-623.7	996.9	932.0	64.90	15.360		
8,800.0	7,084.7	9,050.6	7,255.7	35.0	35.7	99.88	-1,564.9	-623.9	996.7	928.5	68.25	14.605		
8,900.0	7,084.7	9,150.6	7,255.7	36.7	37.3	99.88	-1,664.9	-624.2	996.6	924.9	71.63	13.912		
9,000.0	7,084.7	9,250.6	7,255.7	38.4	39.0	99.88	-1,764.9	-624.4	996.4	921.4	75.06	13.275		
9,100.0	7,084.7	9,350.6	7,255.7	40.2	40.7	99.88	-1,864.9	-624.6	996.2	917.7	78.52	12.688		
9,200.0	7,084.7	9,450.6	7,255.7	41.9	42.5	99.89	-1,964.9	-624.9	996.1	914.1	82.01	12.146		
9,300.0	7,084.7	9,550.6	7,255.7	43.7	44.2	99.89	-2,064.9	-625.1	995.9	910.4	85.53	11.644		
9,400.0	7,084.7	9,650.6	7,255.7	45.5	46.0	99.89	-2,164.9	-625.3	995.8	906.7	89.07	11.180		
9,500.0	7,084.7	9,750.6	7,255.7	47.3	47.7	99.89	-2,264.9	-625.5	995.6	903.0	92.63	10.748		
9,600.0	7,084.7	9,850.6	7,255.7	49.1	49.5	99.89	-2,364.9	-625.8	995.4	899.2	96.20	10.347		
9,700.0	7,084.7	9,950.6	7,255.7	50.9	51.3	99.89	-2,464.9	-626.0	995.3	895.5	99.80	9.973		
9,800.0	7,084.7	10,050.6	7,255.7	52.7	53.1	99.90	-2,564.9	-626.2	995.1	891.7	103.41	9.623		
9,900.0	7,084.7	10,150.6	7,255.7	54.5	54.9	99.90	-2,664.9	-626.5	994.9	887.9	107.03	9.296		
10,000.0	7,084.7	10,250.6	7,255.7	56.3	56.7	99.90	-2,764.9	-626.7	994.8	884.1	110.66	8.989		
10,100.0	7,084.7	10,350.6	7,255.7	58.2	58.5	99.90	-2,864.9	-626.9	994.6	880.3	114.30	8.701		
10,200.0	7,084.7	10,450.6	7,255.7	60.0	60.4	99.90	-2,964.9	-627.2	994.4	876.5	117.96	8.430		
10,300.0	7,084.7	10,550.6	7,255.7	61.9	62.2	99.90	-3,064.9	-627.4	994.3	872.6	121.62	8.175		

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 Gustafson EF 31-374HN
Project:	SEC.31-T7N-R65W	TVD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Reference Site:	Gustafson Pad Sec.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gustafson EF 31-374HN	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 (12-16-13)	Offset TVD Reference:	Offset Datum

Offset Design Gustafson Pad Sec.31-T7N-R65W - Gustafson EF 31-378HC - Wellbore #1 - Plan #1 (12-16-13)												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (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
10,400.0	7,084.7	10,650.6	7,255.7	63.7	64.1	99.91	-3,164.9	-627.6	994.1	868.8	125.29	7.934	
10,500.0	7,084.7	10,750.6	7,255.7	65.6	65.9	99.91	-3,264.9	-627.9	993.9	865.0	128.97	7.707	
10,600.0	7,084.7	10,850.6	7,255.7	67.4	67.7	99.91	-3,364.9	-628.1	993.8	861.1	132.65	7.492	
10,700.0	7,084.7	10,950.6	7,255.7	69.3	69.6	99.91	-3,464.9	-628.3	993.6	857.2	136.34	7.288	
10,800.0	7,084.7	11,050.6	7,255.7	71.2	71.5	99.91	-3,564.9	-628.6	993.4	853.4	140.04	7.094	
10,900.0	7,084.7	11,150.6	7,255.7	73.0	73.3	99.91	-3,664.9	-628.8	993.3	849.5	143.74	6.910	
11,000.0	7,084.7	11,250.6	7,255.7	74.9	75.2	99.92	-3,764.9	-629.0	993.1	845.6	147.44	6.735	
11,100.0	7,084.7	11,350.6	7,255.7	76.8	77.0	99.92	-3,864.9	-629.3	992.9	841.8	151.15	6.569	
11,200.0	7,084.7	11,450.6	7,255.7	78.7	78.9	99.92	-3,964.9	-629.5	992.8	837.9	154.87	6.410	
11,300.0	7,084.7	11,550.6	7,255.7	80.5	80.8	99.92	-4,064.9	-629.7	992.6	834.0	158.58	6.259	
11,400.0	7,084.7	11,650.6	7,255.7	82.4	82.7	99.92	-4,164.9	-630.0	992.4	830.1	162.31	6.115	
11,500.0	7,084.7	11,750.6	7,255.7	84.3	84.5	99.92	-4,264.9	-630.2	992.3	826.2	166.03	5.976	
11,600.0	7,084.7	11,850.6	7,255.7	86.2	86.4	99.93	-4,364.9	-630.4	992.1	822.3	169.76	5.844	
11,700.0	7,084.7	11,950.6	7,255.7	88.1	88.3	99.93	-4,464.9	-630.7	991.9	818.4	173.49	5.718	
11,748.8	7,084.7	11,999.4	7,255.7	88.8	89.2	99.93	-4,513.6	-630.8	991.8	816.7	175.13	5.663	
11,775.9	7,084.7	12,003.1	7,255.7	89.2	89.3	99.93	-4,517.3	-630.8	992.1	816.5	175.61	5.649	

Company:	Great Western	Local Co-ordinate Reference:	Well Gustafson EF 31-374HN
Project:	SEC.31-T7N-R65W	TVD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Reference Site:	Gustafson Pad Sec.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gustafson EF 31-374HN	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 (12-16-13)	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
0.0	0.0	0.0	0.0	0.0	0.0	-88.84	1.8	-90.3	90.4				
100.0	100.0	100.0	100.0	0.1	0.1	-88.84	1.8	-90.3	90.4	90.1	0.22	401.985	
200.0	200.0	200.0	200.0	0.3	0.3	-88.84	1.8	-90.3	90.4	89.7	0.67	133.995	
300.0	300.0	300.0	300.0	0.6	0.6	-88.84	1.8	-90.3	90.4	89.2	1.12	80.397	
400.0	400.0	400.0	400.0	0.8	0.8	-88.84	1.8	-90.3	90.4	88.8	1.57	57.426	
500.0	500.0	500.0	500.0	1.0	1.0	-88.84	1.8	-90.3	90.4	88.3	2.02	44.665	
600.0	600.0	600.0	600.0	1.2	1.2	-88.84	1.8	-90.3	90.4	87.9	2.47	36.544	
700.0	700.0	700.0	700.0	1.5	1.5	-88.84	1.8	-90.3	90.4	87.4	2.92	30.922	
800.0	800.0	800.0	800.0	1.7	1.7	-88.84	1.8	-90.3	90.4	87.0	3.37	26.799	
900.0	900.0	900.0	900.0	1.9	1.9	-88.84	1.8	-90.3	90.4	86.5	3.82	23.646	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-88.84	1.8	-90.3	90.4	86.1	4.27	21.157	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-88.84	1.8	-90.3	90.4	85.6	4.72	19.142	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-88.84	1.8	-90.3	90.4	85.2	5.17	17.478	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-88.84	1.8	-90.3	90.4	84.7	5.62	16.079	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-88.84	1.8	-90.3	90.4	84.3	6.07	14.888	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-88.84	1.8	-90.3	90.4	83.8	6.52	13.862	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	-88.84	1.8	-90.3	90.4	83.4	6.97	12.967	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	-88.84	1.8	-90.3	90.4	82.9	7.42	12.181	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-88.84	1.8	-90.3	90.4	82.5	7.87	11.485	
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	-88.84	1.8	-90.3	90.4	82.0	8.32	10.864	
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	-88.84	1.8	-90.3	90.4	81.6	8.77	10.307	
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	-88.84	1.8	-90.3	90.4	81.1	9.22	9.805	
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	-88.84	1.8	-90.3	90.4	80.7	9.66	9.348	
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	-88.84	1.8	-90.3	90.4	80.2	10.11	8.933	
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	-88.84	1.8	-90.3	90.4	79.8	10.56	8.553	
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	-88.84	1.8	-90.3	90.4	79.3	11.01	8.204	
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	-88.84	1.8	-90.3	90.4	78.9	11.46	7.882	
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	-88.84	1.8	-90.3	90.4	78.4	11.91	7.585	
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	-88.84	1.8	-90.3	90.4	78.0	12.36	7.309	
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	-88.84	1.8	-90.3	90.4	77.5	12.81	7.052	
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	-88.84	1.8	-90.3	90.4	77.1	13.26	6.813	
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	-88.84	1.8	-90.3	90.4	76.6	13.71	6.590	
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	-88.84	1.8	-90.3	90.4	76.2	14.16	6.381	
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	-88.84	1.8	-90.3	90.4	75.7	14.61	6.184	
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	-88.84	1.8	-90.3	90.4	75.3	15.06	6.000	
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	-88.84	1.8	-90.3	90.4	74.8	15.51	5.826	
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	-88.84	1.8	-90.3	90.4	74.4	15.96	5.662	
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	-88.84	1.8	-90.3	90.4	73.9	16.41	5.507	
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	-88.84	1.8	-90.3	90.4	73.5	16.86	5.360	
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	-88.84	1.8	-90.3	90.4	73.0	17.31	5.221	
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	-88.84	1.8	-90.3	90.4	72.6	17.76	5.088	
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	-88.84	1.8	-90.3	90.4	72.1	18.21	4.963	
4,200.0	4,200.0	4,200.0	4,200.0	9.3	9.3	-88.84	1.8	-90.3	90.4	71.7	18.66	4.843	
4,300.0	4,300.0	4,300.0	4,300.0	9.6	9.6	-88.84	1.8	-90.3	90.4	71.2	19.11	4.729	
4,400.0	4,400.0	4,400.0	4,400.0	9.8	9.8	-88.84	1.8	-90.3	90.4	70.8	19.55	4.621	
4,500.0	4,500.0	4,500.0	4,500.0	10.0	10.0	-88.84	1.8	-90.3	90.4	70.3	20.00	4.517	
4,600.0	4,600.0	4,600.0	4,600.0	10.2	10.2	-88.84	1.8	-90.3	90.4	69.9	20.45	4.417	
4,700.0	4,700.0	4,700.0	4,700.0	10.5	10.5	-88.84	1.8	-90.3	90.4	69.4	20.90	4.322	
4,800.0	4,800.0	4,800.0	4,800.0	10.7	10.7	-88.84	1.8	-90.3	90.4	69.0	21.35	4.231	
4,900.0	4,900.0	4,900.0	4,900.0	10.9	10.9	-88.84	1.8	-90.3	90.4	68.6	21.80	4.144	
5,000.0	5,000.0	5,000.0	5,000.0	11.1	11.1	-88.84	1.8	-90.3	90.4	68.1	22.25	4.060	
5,033.4	5,033.4	5,033.4	5,033.4	11.2	11.2	-88.84	1.8	-90.3	90.4	68.0	22.40	4.033 CC, ES	

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 Gustafson EF 31-374HN
Project:	SEC.31-T7N-R65W	TVD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Reference Site:	Gustafson Pad Sec.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gustafson EF 31-374HN	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 (12-16-13)	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	
5,100.0	5,100.0	5,097.9	5,097.9	11.4	11.3	-88.68	2.1	-90.9	90.9	68.2	22.69	4.007 SF	
5,200.0	5,200.0	5,193.6	5,193.4	11.6	11.5	-87.45	4.2	-95.2	95.5	72.4	23.12	4.130	
5,300.0	5,300.0	5,288.5	5,287.9	11.8	11.8	-85.33	8.5	-103.6	104.7	81.1	23.54	4.446	
5,400.0	5,400.0	5,382.3	5,380.6	12.0	12.0	-82.78	14.7	-116.1	118.7	94.7	23.97	4.950	
5,500.0	5,500.0	5,474.4	5,470.9	12.2	12.2	-80.22	22.8	-132.4	137.4	113.0	24.40	5.631	
5,600.0	5,600.0	5,564.5	5,558.3	12.5	12.4	-115.02	32.6	-152.0	161.5	136.7	24.79	6.515	
5,700.0	5,699.8	5,651.9	5,642.0	12.7	12.7	-113.78	43.9	-174.5	192.1	166.9	25.18	7.629	
5,800.0	5,799.1	5,735.9	5,721.3	12.9	12.9	-113.36	56.3	-199.4	228.7	203.2	25.55	8.953	
5,900.0	5,897.6	5,816.2	5,795.8	13.1	13.2	-113.31	69.6	-226.0	271.2	245.3	25.90	10.469	
6,000.0	5,995.1	5,892.3	5,865.2	13.4	13.5	-113.37	83.5	-253.8	319.2	292.9	26.25	12.158	
6,100.0	6,091.4	5,964.0	5,929.5	13.6	13.9	-113.35	97.7	-282.3	372.4	345.8	26.60	14.001	
6,200.0	6,186.1	6,031.2	5,988.6	13.9	14.2	-113.16	112.0	-310.9	430.5	403.5	26.95	15.975	
6,300.0	6,279.0	6,100.8	6,048.8	14.2	14.6	-112.96	127.6	-342.2	492.9	465.5	27.33	18.034	
6,400.0	6,369.8	6,175.2	6,112.9	14.6	15.1	-112.92	144.5	-375.9	557.6	529.9	27.75	20.094	
6,500.0	6,458.3	6,247.2	6,175.0	15.0	15.6	-112.80	160.8	-408.6	624.5	596.3	28.22	22.132	
6,600.0	6,545.9	6,317.3	6,235.4	15.5	16.1	-128.96	176.6	-440.3	693.6	665.3	28.32	24.489	
6,700.0	6,638.5	6,386.6	6,295.2	15.9	16.6	-170.46	192.3	-471.7	765.3	736.8	28.51	26.847	
6,800.0	6,732.7	6,451.9	6,351.5	16.2	17.1	143.12	207.1	-501.3	836.8	807.3	29.55	28.321	
6,900.0	6,823.5	6,509.9	6,401.5	16.4	17.6	111.26	220.2	-527.6	906.1	875.3	30.84	29.384	
7,000.0	6,906.4	6,557.7	6,442.7	16.5	18.0	92.20	231.0	-549.3	972.1	940.4	31.70	30.666	
7,100.0	6,977.2	6,592.6	6,472.8	16.6	18.3	79.65	238.9	-565.1	1,033.8	1,002.1	31.76	32.549	
7,200.0	7,032.1	6,613.1	6,490.4	16.7	18.4	70.52	243.6	-574.4	1,090.5	1,059.5	30.97	35.205	
7,300.0	7,068.3	6,617.9	6,494.6	16.9	18.5	63.53	244.7	-576.6	1,140.8	1,111.3	29.56	38.588	
7,400.0	7,084.1	6,606.9	6,485.2	17.2	18.4	58.19	242.2	-571.6	1,183.5	1,155.4	28.03	42.221	
7,500.0	7,084.7	6,584.9	6,466.2	17.8	18.2	56.28	237.2	-561.6	1,221.6	1,193.8	27.78	43.980	
7,600.0	7,084.7	7,750.3	7,084.7	18.5	22.9	90.00	-364.6	-888.2	1,251.1	1,215.7	35.38	35.359	
7,700.0	7,084.7	7,850.3	7,084.7	19.3	23.3	90.00	-464.6	-888.4	1,250.9	1,213.7	37.19	33.633	
7,800.0	7,084.7	7,950.3	7,084.7	20.4	24.0	90.00	-564.6	-888.6	1,250.7	1,211.4	39.30	31.827	
7,900.0	7,084.7	8,050.3	7,084.7	21.5	24.8	90.00	-664.6	-888.8	1,250.5	1,208.8	41.65	30.024	
8,000.0	7,084.7	8,150.3	7,084.7	22.8	25.7	90.00	-764.6	-889.0	1,250.3	1,206.1	44.21	28.279	
8,100.0	7,084.7	8,250.3	7,084.7	24.1	26.8	90.00	-864.6	-889.2	1,250.1	1,203.1	46.95	26.626	
8,200.0	7,084.7	8,350.3	7,084.7	25.5	28.0	90.00	-964.6	-889.4	1,249.9	1,200.0	49.83	25.081	
8,300.0	7,084.7	8,450.3	7,084.7	27.0	29.2	90.00	-1,064.6	-889.6	1,249.7	1,196.8	52.84	23.649	
8,400.0	7,084.7	8,550.3	7,084.7	28.5	30.6	90.00	-1,164.6	-889.8	1,249.5	1,193.5	55.95	22.331	
8,500.0	7,084.7	8,650.3	7,084.7	30.1	32.0	90.00	-1,264.6	-890.0	1,249.3	1,190.1	59.15	21.121	
8,600.0	7,084.7	8,750.3	7,084.7	31.7	33.5	90.00	-1,364.6	-890.2	1,249.1	1,186.6	62.42	20.011	
8,700.0	7,084.7	8,850.3	7,084.7	33.3	35.1	90.00	-1,464.6	-890.4	1,248.9	1,183.1	65.75	18.994	
8,800.0	7,084.7	8,950.3	7,084.7	35.0	36.7	90.00	-1,564.6	-890.6	1,248.7	1,179.5	69.14	18.061	
8,900.0	7,084.7	9,050.3	7,084.7	36.7	38.3	90.00	-1,664.6	-890.8	1,248.5	1,175.9	72.57	17.204	
9,000.0	7,084.7	9,150.3	7,084.7	38.4	39.9	90.00	-1,764.6	-891.0	1,248.3	1,172.2	76.04	16.416	
9,100.0	7,084.7	9,250.3	7,084.7	40.2	41.6	90.00	-1,864.6	-891.2	1,248.1	1,168.5	79.54	15.691	
9,200.0	7,084.7	9,350.3	7,084.7	41.9	43.3	90.00	-1,964.6	-891.4	1,247.9	1,164.8	83.08	15.020	
9,300.0	7,084.7	9,450.3	7,084.7	43.7	45.0	90.00	-2,064.6	-891.6	1,247.7	1,161.0	86.64	14.401	
9,400.0	7,084.7	9,550.3	7,084.7	45.5	46.7	90.00	-2,164.6	-891.8	1,247.5	1,157.2	90.23	13.826	
9,500.0	7,084.7	9,650.3	7,084.7	47.3	48.4	90.00	-2,264.6	-892.0	1,247.3	1,153.4	93.83	13.293	
9,600.0	7,084.7	9,750.3	7,084.7	49.1	50.2	90.00	-2,364.6	-892.2	1,247.1	1,149.6	97.45	12.796	
9,700.0	7,084.7	9,850.3	7,084.7	50.9	52.0	90.00	-2,464.6	-892.4	1,246.9	1,145.8	101.10	12.334	
9,800.0	7,084.7	9,950.3	7,084.7	52.7	53.7	90.00	-2,564.6	-892.6	1,246.7	1,141.9	104.75	11.901	
9,900.0	7,084.7	10,050.3	7,084.7	54.5	55.5	90.00	-2,664.6	-892.8	1,246.5	1,138.0	108.42	11.497	
10,000.0	7,084.7	10,150.3	7,084.7	56.3	57.3	90.00	-2,764.6	-893.0	1,246.3	1,134.2	112.10	11.118	
10,100.0	7,084.7	10,250.3	7,084.7	58.2	59.1	90.00	-2,864.6	-893.2	1,246.1	1,130.3	115.79	10.762	
10,200.0	7,084.7	10,350.3	7,084.7	60.0	60.9	90.00	-2,964.6	-893.4	1,245.9	1,126.4	119.49	10.427	

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 Gustafson EF 31-374HN
Project:	SEC.31-T7N-R65W	TVD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Reference Site:	Gustafson Pad Sec.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gustafson EF 31-374HN	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 (12-16-13)	Offset TVD Reference:	Offset Datum

Offset Design		Gustafson Pad Sec.31-T7N-R65W - Gustafson EF 31-379HN - Wellbore #1 - Plan #1 (12-16-13)										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			
10,300.0	7,084.7	10,450.3	7,084.7	61.9	62.7	90.00	-3,064.6	-893.6	1,245.7	1,122.5	123.20	10.111			
10,400.0	7,084.7	10,550.3	7,084.7	63.7	64.6	90.00	-3,164.6	-893.8	1,245.5	1,118.6	126.92	9.813			
10,500.0	7,084.7	10,650.3	7,084.7	65.6	66.4	90.00	-3,264.6	-894.0	1,245.3	1,114.6	130.64	9.532			
10,600.0	7,084.7	10,750.3	7,084.7	67.4	68.2	90.00	-3,364.6	-894.2	1,245.1	1,110.7	134.37	9.266			
10,700.0	7,084.7	10,850.3	7,084.7	69.3	70.1	90.00	-3,464.6	-894.4	1,244.9	1,106.8	138.11	9.014			
10,800.0	7,084.7	10,950.3	7,084.7	71.2	71.9	90.00	-3,564.6	-894.6	1,244.7	1,102.8	141.85	8.774			
10,900.0	7,084.7	11,050.3	7,084.7	73.0	73.8	90.00	-3,664.6	-894.8	1,244.5	1,098.9	145.60	8.547			
11,000.0	7,084.7	11,150.3	7,084.7	74.9	75.6	90.00	-3,764.6	-895.0	1,244.3	1,094.9	149.36	8.331			
11,100.0	7,084.7	11,250.3	7,084.7	76.8	77.5	90.00	-3,864.6	-895.2	1,244.1	1,091.0	153.11	8.125			
11,200.0	7,084.7	11,350.3	7,084.7	78.7	79.3	90.00	-3,964.6	-895.4	1,243.9	1,087.0	156.88	7.929			
11,300.0	7,084.7	11,450.3	7,084.7	80.5	81.2	90.00	-4,064.6	-895.6	1,243.7	1,083.0	160.64	7.742			
11,400.0	7,084.7	11,550.3	7,084.7	82.4	83.1	90.00	-4,164.6	-895.8	1,243.5	1,079.1	164.41	7.563			
11,500.0	7,084.7	11,650.3	7,084.7	84.3	84.9	90.00	-4,264.6	-896.0	1,243.3	1,075.1	168.19	7.392			
11,600.0	7,084.7	11,750.3	7,084.7	86.2	86.8	90.00	-4,364.6	-896.2	1,243.1	1,071.1	171.96	7.229			
11,700.0	7,084.7	11,850.3	7,084.7	88.1	88.7	90.00	-4,464.6	-896.4	1,242.9	1,067.1	175.74	7.072			
11,745.1	7,084.7	11,895.4	7,084.7	88.8	89.5	90.00	-4,509.7	-896.5	1,242.8	1,065.5	177.29	7.010			
11,775.9	7,084.7	11,895.7	7,084.7	89.2	89.6	90.00	-4,510.0	-896.5	1,243.1	1,065.3	177.76	6.993			

Company:	Great Western	Local Co-ordinate Reference:	Well Gustafson EF 31-374HN
Project:	SEC.31-T7N-R65W	TVD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Reference Site:	Gustafson Pad Sec.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gustafson EF 31-374HN	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 (12-16-13)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4844.7ft (RKB - 16.5)
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000 °

Coordinates are relative to: Gustafson EF 31-374HN
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.51°



Company:	Great Western	Local Co-ordinate Reference:	Well Gustafson EF 31-374HN
Project:	SEC.31-T7N-R65W	TVD Reference:	WELL @ 4844.7ft (RKB - 16.5)
Reference Site:	Gustafson Pad Sec.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (RKB - 16.5)
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