

Great Western

Well Name: **Gustafson EF 31-379HN**

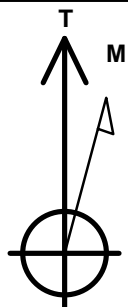
Surface Location: Gustafson Pad Sec.31-T7N-R65W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4828.2

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1439922.35	3219213.13	40.538311	-104.711289	
Original Well Elev WELL @ 4844.7ft (Original Well Elev)						

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 280'FNL & 1267'FWL	1.0	0.0	0.0	Point
BHL 470'FSL & 470'FWL	7084.7	-4511.4	-806.2	Point
Entry Pt. 460'FNL & 470'FWL	7084.7	-156.6	-797.4	Point



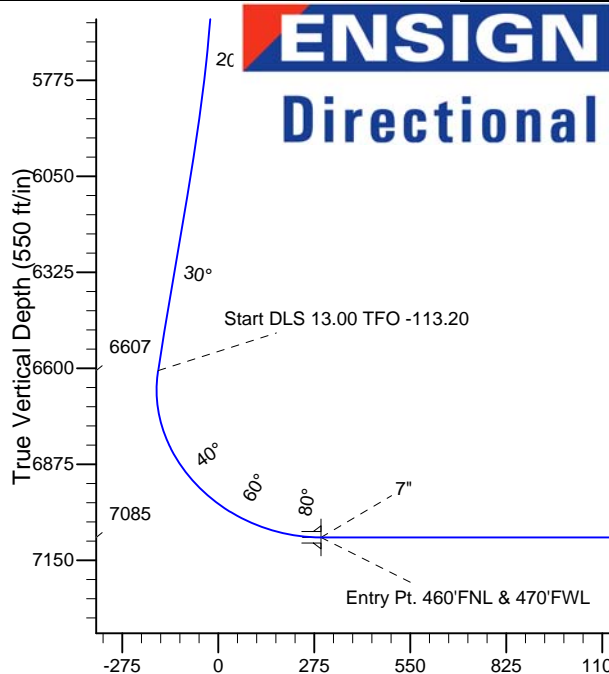
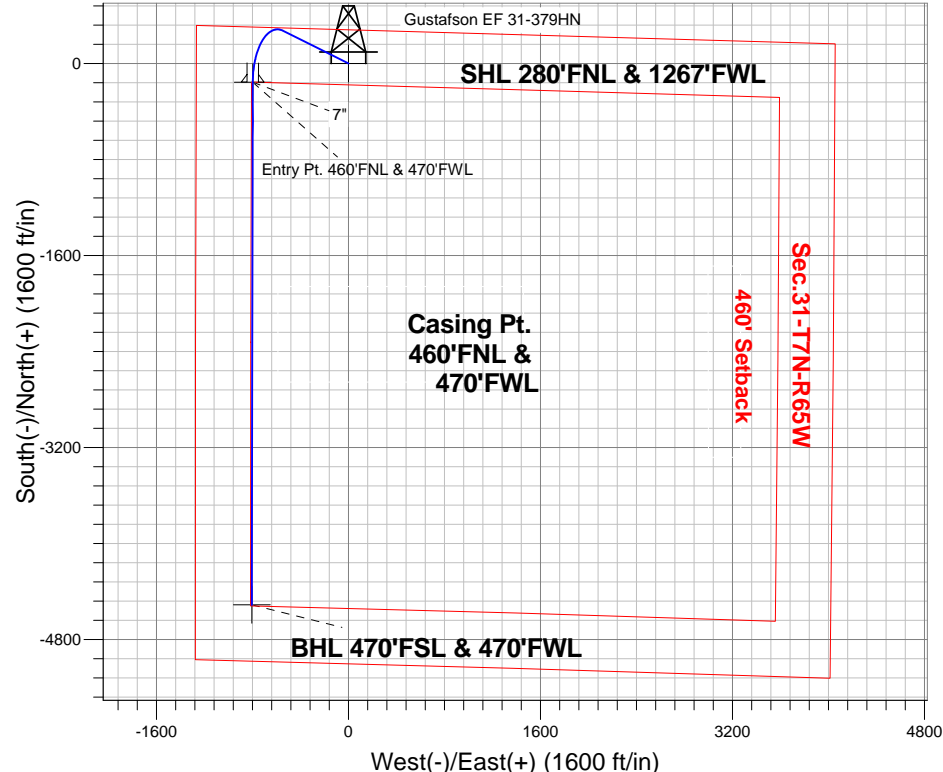
Azimuths to True North
Magnetic North: 8.51°

Magnetic Field
Strength: 52945.2snT
Dip Angle: 67.08°
Date: 12/16/2013
Model: IGRF2010

Gustafson Pad Sec.31-T7N-R65W
Gustafson EF 31-379HN
Plan #1 (12-16-13)
10:23, December 18 2013

ANNOTATIONS

TVD	MD	Annotation
5050.0	5050.0	KOP - Start Build 3.00
6606.7	6747.9	Start DLS 13.00 TFO -113.20
7084.7	11895.2	TD at 11895.2



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	5050.0	0.00	0.00	5050.0	0.0	0.0	0.00	0.00	0.0	
3	6064.5	30.43	296.54	6017.5	117.6	-235.4	3.00	296.54	-74.3	
4	6747.9	30.43	296.54	6606.7	272.3	-545.1	0.00	0.00	-172.1	
5	7540.5	90.00	180.11	7084.7	-156.6	-797.4	13.00	-113.20	294.5	Entry Pt. 460'FNL & 470'FWL
6	7541.0	90.00	180.12	7084.7	-157.2	-797.4	1.00	90.00	295.0	
7	11895.2	90.00	180.12	7084.7	-4511.4	-806.2	0.00	0.00	4582.8	BHL 470'FSL & 470'FWL

Vertical Section at 190.13° (550 ft/in)



Great Western

SEC.31-T7N-R65W

Gustafson Pad Sec.31-T7N-R65W

Gustafson EF 31-379HN

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	
5,050.0	0.00	0.00	5,050.0	0.0	0.0	0.00	0.00	0.00	0.00	
6,064.5	30.43	296.54	6,017.5	117.6	-235.4	3.00	3.00	0.00	296.54	
6,747.9	30.43	296.54	6,606.7	272.3	-545.1	0.00	0.00	0.00	0.00	
7,540.5	90.00	180.11	7,084.7	-156.6	-797.4	13.00	7.52	-14.69	-113.20	Entry Pt. 460'FNL & 470'FSL
7,541.0	90.00	180.12	7,084.7	-157.2	-797.4	1.00	0.00	1.00	90.00	
11,895.2	90.00	180.12	7,084.7	-4,511.4	-806.2	0.00	0.00	0.00	0.00	BHL 470'FSL & 470'FNL

Database:	Landmark	Local Co-ordinate Reference:	Well Gustafson EF 31-379HN
Company:	Great Western	TVD Reference:	WELL @ 4844.7ft (Original Well Elev)
Project:	SEC.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (Original Well Elev)
Site:	Gustafson Pad Sec.31-T7N-R65W	North Reference:	True
Well:	Gustafson EF 31-379HN	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 & 1267'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
5,050.0	0.00	0.00	5,050.0	0.0	0.0	0.0	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Gustafson EF 31-379HN
Company:	Great Western	TVD Reference:	WELL @ 4844.7ft (Original Well Elev)
Project:	SEC.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (Original Well Elev)
Site:	Gustafson Pad Sec.31-T7N-R65W	North Reference:	True
Well:	Gustafson EF 31-379HN	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)
KOP - Start Build 3.00									
5,100.0	1.50	296.54	5,100.0	0.3	-0.6	-0.2	3.00	3.00	0.00
5,200.0	4.50	296.54	5,199.8	2.6	-5.3	-1.7	3.00	3.00	0.00
5,300.0	7.50	296.54	5,299.3	7.3	-14.6	-4.6	3.00	3.00	0.00
5,400.0	10.50	296.54	5,398.0	14.3	-28.6	-9.0	3.00	3.00	0.00
5,500.0	13.50	296.54	5,495.8	23.6	-47.2	-14.9	3.00	3.00	0.00
5,600.0	16.50	296.54	5,592.4	35.1	-70.4	-22.2	3.00	3.00	0.00
5,700.0	19.50	296.54	5,687.5	48.9	-98.0	-30.9	3.00	3.00	0.00
5,800.0	22.50	296.54	5,780.9	65.0	-130.1	-41.1	3.00	3.00	0.00
5,900.0	25.50	296.54	5,872.2	83.1	-166.4	-52.6	3.00	3.00	0.00
6,000.0	28.50	296.54	5,961.3	103.4	-207.1	-65.4	3.00	3.00	0.00
6,064.5	30.43	296.54	6,017.5	117.6	-235.4	-74.3	3.00	3.00	0.00
6,100.0	30.43	296.54	6,048.1	125.6	-251.5	-79.4	0.00	0.00	0.00
6,200.0	30.43	296.54	6,134.3	148.3	-296.8	-93.7	0.00	0.00	0.00
6,300.0	30.43	296.54	6,220.5	170.9	-342.2	-108.0	0.00	0.00	0.00
6,400.0	30.43	296.54	6,306.7	193.5	-387.5	-122.3	0.00	0.00	0.00
6,500.0	30.43	296.54	6,393.0	216.2	-432.8	-136.7	0.00	0.00	0.00
6,600.0	30.43	296.54	6,479.2	238.8	-478.1	-151.0	0.00	0.00	0.00
6,700.0	30.43	296.54	6,565.4	261.4	-523.4	-165.3	0.00	0.00	0.00
6,747.9	30.43	296.54	6,606.7	272.3	-545.1	-172.1	0.00	0.00	0.00
Start DLS 13.00 TFO -113.20									
6,800.0	28.39	283.37	6,652.1	281.0	-569.0	-176.6	13.00	-3.92	-25.29
6,900.0	28.49	255.87	6,740.4	280.7	-615.5	-168.1	13.00	0.10	-27.50
7,000.0	33.59	232.49	6,826.4	257.9	-660.8	-137.7	13.00	5.10	-23.38
7,100.0	41.89	216.02	6,905.6	213.9	-702.5	-87.0	13.00	8.30	-16.47
7,200.0	51.86	204.51	6,974.0	150.8	-738.6	-18.6	13.00	9.96	-11.50
7,300.0	62.66	195.89	7,028.1	72.0	-767.2	64.1	13.00	10.81	-8.62
7,400.0	73.90	188.84	7,065.1	-18.6	-786.8	156.7	13.00	11.24	-7.05
7,500.0	85.35	182.56	7,083.1	-116.2	-796.5	254.5	13.00	11.45	-6.28
7,540.5	90.00	180.11	7,084.7	-156.6	-797.4	294.5	12.99	11.49	-6.06
7" - Entry Pt. 460'FNL & 470'FWL									
7,541.0	90.00	180.12	7,084.7	-157.2	-797.4	295.0	1.05	0.91	0.52
7,600.0	90.00	180.12	7,084.7	-216.2	-797.6	353.1	0.00	0.00	0.00
7,700.0	90.00	180.12	7,084.7	-316.2	-797.8	451.6	0.00	0.00	0.00
7,800.0	90.00	180.12	7,084.7	-416.2	-798.0	550.1	0.00	0.00	0.00
7,900.0	90.00	180.12	7,084.7	-516.2	-798.2	648.5	0.00	0.00	0.00
8,000.0	90.00	180.12	7,084.7	-616.2	-798.4	747.0	0.00	0.00	0.00
8,100.0	90.00	180.12	7,084.7	-716.2	-798.6	845.5	0.00	0.00	0.00
8,200.0	90.00	180.12	7,084.7	-816.2	-798.8	944.0	0.00	0.00	0.00
8,300.0	90.00	180.12	7,084.7	-916.2	-799.0	1,042.4	0.00	0.00	0.00
8,400.0	90.00	180.12	7,084.7	-1,016.2	-799.2	1,140.9	0.00	0.00	0.00
8,500.0	90.00	180.12	7,084.7	-1,116.2	-799.4	1,239.4	0.00	0.00	0.00
8,600.0	90.00	180.12	7,084.7	-1,216.2	-799.6	1,337.9	0.00	0.00	0.00
8,700.0	90.00	180.12	7,084.7	-1,316.2	-799.8	1,436.3	0.00	0.00	0.00
8,800.0	90.00	180.12	7,084.7	-1,416.2	-800.0	1,534.8	0.00	0.00	0.00
8,900.0	90.00	180.12	7,084.7	-1,516.2	-800.2	1,633.3	0.00	0.00	0.00
9,000.0	90.00	180.12	7,084.7	-1,616.2	-800.4	1,731.8	0.00	0.00	0.00
9,100.0	90.00	180.12	7,084.7	-1,716.2	-800.6	1,830.2	0.00	0.00	0.00
9,200.0	90.00	180.12	7,084.7	-1,816.2	-800.8	1,928.7	0.00	0.00	0.00
9,300.0	90.00	180.12	7,084.7	-1,916.2	-801.0	2,027.2	0.00	0.00	0.00
9,400.0	90.00	180.12	7,084.7	-2,016.2	-801.2	2,125.7	0.00	0.00	0.00
9,500.0	90.00	180.12	7,084.7	-2,116.2	-801.4	2,224.1	0.00	0.00	0.00
9,600.0	90.00	180.12	7,084.7	-2,216.2	-801.6	2,322.6	0.00	0.00	0.00

Plan Annotations					
	Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
			+N/-S (ft)	+E/-W (ft)	
	5,050.0	5,050.0	0.0	0.0	KOP - Start Build 3.00
	6,747.9	6,606.7	272.3	-545.1	Start DLS 13.00 TFO -113.20
	11,895.2	7,084.7	-4,511.4	-806.2	TD at 11895.2



Great Western

SEC.31-T7N-R65W

Gustafson Pad Sec.31-T7N-R65W

Gustafson EF 31-379HN

Wellbore #1

Plan #1 (12-16-13)

Anticollision Report

18 December, 2013

Company:	Great Western	Local Co-ordinate Reference:	Well Gustafson EF 31-379HN
Project:	SEC.31-T7N-R65W	TVD Reference:	WELL @ 4844.7ft (Original Well Elev)
Reference Site:	Gustafson Pad Sec.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gustafson EF 31-379HN	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	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-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	91.16	-1.8	90.3	90.4	68.1	22.25	4.060 CC	
5,027.8	5,027.8	5,027.8	5,027.8	11.2	11.2	154.65	-1.8	90.3	90.4	68.1	22.38	4.042 ES	
5,100.0	5,100.0	5,100.0	5,100.0	11.3	11.4	154.79	-1.8	90.3	90.9	68.3	22.69	4.008 SF	
5,200.0	5,199.8	5,199.8	5,199.8	11.6	11.6	156.06	-1.8	90.3	95.7	72.6	23.08	4.147	
5,300.0	5,299.3	5,299.3	5,299.3	11.8	11.8	158.26	-1.8	90.3	105.3	81.9	23.42	4.498	
5,400.0	5,398.0	5,398.0	5,398.0	12.0	12.0	160.88	-1.8	90.3	120.0	96.3	23.70	5.065	
5,500.0	5,495.8	5,495.8	5,495.8	12.2	12.2	163.49	-1.8	90.3	139.9	115.9	23.92	5.847	
5,600.0	5,592.4	5,590.1	5,590.1	12.5	12.5	165.44	-1.0	91.0	165.4	141.3	24.08	6.868	
5,700.0	5,687.5	5,681.2	5,681.0	12.8	12.7	165.92	3.2	94.1	197.6	173.4	24.18	8.173	
5,800.0	5,780.9	5,769.3	5,768.6	13.2	12.8	165.44	10.5	99.7	236.4	212.2	24.24	9.755	
5,900.0	5,872.2	5,853.8	5,852.2	13.6	13.0	164.41	20.5	107.3	281.5	257.3	24.27	11.602	
6,000.0	5,961.3	5,934.1	5,931.0	14.1	13.2	163.09	32.8	116.6	332.7	308.4	24.27	13.705	
6,100.0	6,048.1	6,010.2	6,005.0	14.6	13.4	161.83	46.8	127.2	389.3	364.8	24.44	15.929	
6,200.0	6,134.3	6,083.5	6,075.6	15.3	13.6	160.82	62.5	139.2	448.2	423.3	24.92	17.985	
6,300.0	6,220.5	6,154.5	6,143.2	16.0	13.8	159.72	79.8	152.3	508.7	483.3	25.44	19.994	
6,400.0	6,306.7	6,223.1	6,207.7	16.7	14.0	158.57	98.4	166.4	570.7	544.7	25.99	21.953	
6,500.0	6,393.0	6,289.3	6,269.1	17.5	14.2	157.42	118.0	181.3	634.1	607.6	26.58	23.857	
6,600.0	6,479.2	6,353.0	6,327.4	18.3	14.4	156.28	138.6	196.9	699.1	671.9	27.21	25.697	
6,700.0	6,565.4	6,414.2	6,382.6	19.2	14.7	155.17	159.7	213.0	765.6	737.7	27.86	27.479	
6,800.0	6,652.1	6,472.4	6,434.2	20.0	14.9	171.71	181.2	229.3	833.5	805.5	28.03	29.733	

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 31-379HN
Project:	SEC.31-T7N-R65W	TVD Reference:	WELL @ 4844.7ft (Original Well Elev)
Reference Site:	Gustafson Pad Sec.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gustafson EF 31-379HN	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		
6,900.0	6,740.4	6,522.8	6,478.1	20.6	15.1	-154.03	200.7	244.1	902.3	873.7	28.56	31.587		
7,000.0	6,826.4	6,570.8	6,519.9	21.2	15.4	-125.32	219.4	258.7	970.0	940.1	29.84	32.504		
7,100.0	6,905.6	6,614.5	6,559.1	21.6	15.6	-104.90	232.9	272.4	1,034.9	1,003.8	31.04	33.336		
7,200.0	6,974.0	6,658.6	6,599.7	21.9	15.7	-91.27	242.3	286.6	1,095.3	1,063.6	31.62	34.636		
7,300.0	7,028.1	6,706.3	6,644.4	22.1	15.9	-82.52	247.6	302.3	1,149.7	1,118.1	31.55	36.442		
7,400.0	7,065.1	6,766.9	6,701.6	22.3	16.1	-77.75	246.8	322.2	1,196.9	1,165.6	31.22	38.339		
7,500.0	7,083.1	6,893.2	6,817.6	22.4	16.4	-78.47	218.8	362.5	1,235.3	1,204.0	31.37	39.379		
7,600.0	7,084.7	7,452.2	7,084.7	22.5	17.5	-90.00	-221.2	453.8	1,251.4	1,218.0	33.36	37.514		
7,700.0	7,084.7	7,552.2	7,084.7	22.7	18.1	-90.00	-321.2	453.4	1,251.2	1,216.5	34.62	36.144		
7,800.0	7,084.7	7,652.2	7,084.7	23.1	18.9	-90.00	-421.2	453.0	1,251.0	1,214.7	36.26	34.497		
7,900.0	7,084.7	7,752.2	7,084.7	23.6	19.9	-90.00	-521.2	452.6	1,250.8	1,212.5	38.23	32.720		
8,000.0	7,084.7	7,852.2	7,084.7	24.3	21.0	-90.00	-621.2	452.2	1,250.6	1,210.1	40.46	30.908		
8,100.0	7,084.7	7,952.2	7,084.7	25.2	22.2	-90.00	-721.2	451.8	1,250.4	1,207.4	42.93	29.129		
8,200.0	7,084.7	8,052.2	7,084.7	26.2	23.5	-90.00	-821.2	451.4	1,250.2	1,204.6	45.58	27.428		
8,300.0	7,084.7	8,152.2	7,084.7	27.3	24.8	-90.00	-921.2	451.0	1,250.0	1,201.6	48.40	25.828		
8,400.0	7,084.7	8,252.2	7,084.7	28.6	26.3	-90.00	-1,021.2	450.6	1,249.8	1,198.4	51.35	24.340		
8,500.0	7,084.7	8,352.2	7,084.7	29.9	27.8	-90.00	-1,121.2	450.2	1,249.6	1,195.2	54.41	22.967		
8,600.0	7,084.7	8,452.2	7,084.7	31.3	29.3	-90.00	-1,221.2	449.8	1,249.4	1,191.8	57.56	21.704		
8,700.0	7,084.7	8,552.2	7,084.7	32.8	30.9	-90.00	-1,321.2	449.4	1,249.2	1,188.4	60.80	20.546		
8,800.0	7,084.7	8,652.2	7,084.7	34.3	32.6	-90.00	-1,421.2	449.0	1,249.0	1,184.9	64.10	19.485		
8,900.0	7,084.7	8,752.2	7,084.7	35.9	34.2	-90.00	-1,521.2	448.6	1,248.8	1,181.3	67.46	18.511		
9,000.0	7,084.7	8,852.2	7,084.7	37.4	35.9	-90.00	-1,621.2	448.2	1,248.6	1,177.7	70.87	17.618		
9,100.0	7,084.7	8,952.2	7,084.7	39.1	37.6	-90.00	-1,721.2	447.8	1,248.4	1,174.0	74.32	16.797		
9,200.0	7,084.7	9,052.2	7,084.7	40.7	39.3	-90.00	-1,821.2	447.4	1,248.2	1,170.4	77.81	16.041		
9,300.0	7,084.7	9,152.2	7,084.7	42.4	41.1	-90.00	-1,921.2	447.0	1,248.0	1,166.6	81.33	15.344		
9,400.0	7,084.7	9,252.2	7,084.7	44.1	42.8	-90.00	-2,021.2	446.6	1,247.8	1,162.9	84.88	14.700		
9,500.0	7,084.7	9,352.2	7,084.7	45.8	44.6	-90.00	-2,121.2	446.2	1,247.6	1,159.1	88.45	14.104		
9,600.0	7,084.7	9,452.2	7,084.7	47.6	46.4	-90.00	-2,221.2	445.8	1,247.4	1,155.3	92.05	13.551		
9,700.0	7,084.7	9,552.2	7,084.7	49.3	48.2	-90.00	-2,321.2	445.4	1,247.2	1,151.5	95.67	13.037		
9,800.0	7,084.7	9,652.2	7,084.7	51.1	50.0	-90.00	-2,421.2	445.0	1,247.0	1,147.7	99.30	12.558		
9,900.0	7,084.7	9,752.2	7,084.7	52.8	51.8	-90.00	-2,521.2	444.6	1,246.8	1,143.8	102.95	12.111		
10,000.0	7,084.7	9,852.2	7,084.7	54.6	53.6	-90.00	-2,621.2	444.2	1,246.6	1,140.0	106.61	11.693		
10,100.0	7,084.7	9,952.2	7,084.7	56.4	55.5	-90.00	-2,721.2	443.8	1,246.4	1,136.1	110.28	11.302		
10,200.0	7,084.7	10,052.2	7,084.7	58.2	57.3	-90.00	-2,821.2	443.4	1,246.2	1,132.2	113.97	10.934		
10,300.0	7,084.7	10,152.2	7,084.7	60.0	59.1	-90.00	-2,921.2	443.0	1,246.0	1,128.3	117.66	10.589		
10,400.0	7,084.7	10,252.2	7,084.7	61.8	61.0	-90.00	-3,021.2	442.6	1,245.8	1,124.4	121.37	10.264		
10,500.0	7,084.7	10,352.2	7,084.7	63.7	62.8	-90.00	-3,121.2	442.2	1,245.6	1,120.5	125.08	9.958		
10,600.0	7,084.7	10,452.2	7,084.7	65.5	64.7	-90.00	-3,221.2	441.8	1,245.4	1,116.6	128.80	9.669		
10,700.0	7,084.7	10,552.2	7,084.7	67.3	66.5	-90.00	-3,321.2	441.4	1,245.2	1,112.6	132.53	9.395		
10,800.0	7,084.7	10,652.2	7,084.7	69.2	68.4	-90.00	-3,421.2	441.0	1,245.0	1,108.7	136.27	9.136		
10,900.0	7,084.7	10,752.2	7,084.7	71.0	70.3	-90.00	-3,521.2	440.6	1,244.8	1,104.8	140.01	8.891		
11,000.0	7,084.7	10,852.2	7,084.7	72.8	72.1	-90.00	-3,621.2	440.2	1,244.6	1,100.8	143.75	8.658		
11,100.0	7,084.7	10,952.2	7,084.7	74.7	74.0	-90.00	-3,721.2	439.8	1,244.4	1,096.9	147.50	8.436		
11,200.0	7,084.7	11,052.2	7,084.7	76.5	75.9	-90.00	-3,821.2	439.3	1,244.2	1,092.9	151.26	8.225		
11,300.0	7,084.7	11,152.2	7,084.7	78.4	77.8	-90.00	-3,921.2	438.9	1,244.0	1,088.9	155.02	8.025		
11,400.0	7,084.7	11,252.2	7,084.7	80.3	79.6	-90.00	-4,021.2	438.5	1,243.8	1,085.0	158.79	7.833		
11,500.0	7,084.7	11,352.2	7,084.7	82.1	81.5	-90.00	-4,121.2	438.1	1,243.6	1,081.0	162.55	7.650		
11,600.0	7,084.7	11,452.2	7,084.7	84.0	83.4	-90.00	-4,221.2	437.7	1,243.4	1,077.0	166.33	7.476		
11,700.0	7,084.7	11,552.2	7,084.7	85.9	85.3	-90.00	-4,321.2	437.3	1,243.2	1,073.1	170.10	7.308		
11,800.0	7,084.7	11,652.2	7,084.7	87.7	87.2	-90.00	-4,421.2	436.9	1,243.0	1,069.1	173.88	7.148		
11,895.7	7,084.7	11,747.9	7,084.7	89.6	88.8	-90.00	-4,516.8	436.6	1,242.8	1,065.5	177.32	7.009		

Company:	Great Western	Local Co-ordinate Reference:	Well Gustafson EF 31-379HN
Project:	SEC.31-T7N-R65W	TVD Reference:	WELL @ 4844.7ft (Original Well Elev)
Reference Site:	Gustafson Pad Sec.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gustafson EF 31-379HN	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	91.05	-1.1	60.3	60.3					
100.0	100.0	100.0	100.0	0.1	0.1	91.05	-1.1	60.3	60.3	60.1	0.22	268.393		
200.0	200.0	200.0	200.0	0.3	0.3	91.05	-1.1	60.3	60.3	59.7	0.67	89.464		
300.0	300.0	300.0	300.0	0.6	0.6	91.05	-1.1	60.3	60.3	59.2	1.12	53.679		
400.0	400.0	400.0	400.0	0.8	0.8	91.05	-1.1	60.3	60.3	58.8	1.57	38.342		
500.0	500.0	500.0	500.0	1.0	1.0	91.05	-1.1	60.3	60.3	58.3	2.02	29.821		
600.0	600.0	600.0	600.0	1.2	1.2	91.05	-1.1	60.3	60.3	57.9	2.47	24.399		
700.0	700.0	700.0	700.0	1.5	1.5	91.05	-1.1	60.3	60.3	57.4	2.92	20.646		
800.0	800.0	800.0	800.0	1.7	1.7	91.05	-1.1	60.3	60.3	57.0	3.37	17.893		
900.0	900.0	900.0	900.0	1.9	1.9	91.05	-1.1	60.3	60.3	56.5	3.82	15.788		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	91.05	-1.1	60.3	60.3	56.1	4.27	14.126		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	91.05	-1.1	60.3	60.3	55.6	4.72	12.781		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	91.05	-1.1	60.3	60.3	55.2	5.17	11.669		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	91.05	-1.1	60.3	60.3	54.7	5.62	10.736		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	91.05	-1.1	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	91.05	-1.1	60.3	60.3	53.8	6.52	9.255		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	91.05	-1.1	60.3	60.3	53.4	6.97	8.658		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	91.05	-1.1	60.3	60.3	52.9	7.42	8.133		
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	91.05	-1.1	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	91.05	-1.1	60.3	60.3	52.0	8.32	7.254		
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	91.05	-1.1	60.3	60.3	51.6	8.77	6.882		
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	91.05	-1.1	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	91.05	-1.1	60.3	60.3	50.7	9.66	6.242		
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	91.05	-1.1	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	91.05	-1.1	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	91.05	-1.1	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	91.05	-1.1	60.3	60.3	48.9	11.46	5.263		
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	91.05	-1.1	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	91.05	-1.1	60.3	60.3	48.0	12.36	4.880		
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	91.05	-1.1	60.3	60.3	47.5	12.81	4.709		
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	91.05	-1.1	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	91.05	-1.1	60.3	60.3	46.6	13.71	4.400		
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	91.05	-1.1	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	91.05	-1.1	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	91.05	-1.1	60.3	60.3	45.3	15.06	4.006		
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	91.05	-1.1	60.3	60.3	44.8	15.51	3.890		
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	91.05	-1.1	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	91.05	-1.1	60.3	60.3	43.9	16.41	3.677		
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	91.05	-1.1	60.3	60.3	43.5	16.86	3.579		
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	91.05	-1.1	60.3	60.3	43.0	17.31	3.486		
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	91.05	-1.1	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	91.05	-1.1	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	91.05	-1.1	60.3	60.3	41.7	18.66	3.234		
4,300.0	4,300.0	4,300.0	4,300.0	9.6	9.6	91.05	-1.1	60.3	60.3	41.2	19.11	3.158		
4,400.0	4,400.0	4,400.0	4,400.0	9.8	9.8	91.05	-1.1	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	91.05	-1.1	60.3	60.3	40.3	20.00	3.016		
4,600.0	4,600.0	4,600.0	4,600.0	10.2	10.2	91.05	-1.1	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	91.05	-1.1	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	91.05	-1.1	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	91.05	-1.1	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	91.05	-1.1	60.3	60.3	38.1	22.25	2.711 CC		
5,027.9	5,027.9	5,027.9	5,027.9	11.2	11.2	154.55	-1.1	60.3	60.4	38.0	22.38	2.700 ES		

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

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	
5,100.0	5,100.0	5,100.0	5,100.0	11.3	11.4	154.77	-1.1	60.3	60.9	38.2	22.69	2.685 SF		
5,200.0	5,199.8	5,199.8	5,199.8	11.6	11.6	156.66	-1.1	60.3	65.7	42.6	23.08	2.846		
5,300.0	5,299.3	5,299.3	5,299.3	11.8	11.8	159.70	-1.1	60.3	75.4	52.0	23.42	3.220		
5,400.0	5,398.0	5,398.0	5,398.0	12.0	12.0	163.02	-1.1	60.3	90.2	66.6	23.69	3.809		
5,500.0	5,495.8	5,495.8	5,495.8	12.2	12.2	166.02	-1.1	60.3	110.3	86.4	23.91	4.614		
5,600.0	5,592.4	5,592.4	5,592.4	12.5	12.5	168.50	-1.1	60.3	135.6	111.5	24.06	5.635		
5,700.0	5,687.5	5,687.5	5,687.5	12.8	12.7	170.47	-1.1	60.3	166.0	141.9	24.16	6.872		
5,800.0	5,780.9	5,785.6	5,785.6	13.2	12.9	171.91	-0.4	60.0	201.1	176.9	24.21	8.306		
5,900.0	5,872.2	5,892.7	5,892.3	13.6	13.1	171.65	7.7	56.7	236.4	212.2	24.23	9.755		
6,000.0	5,961.3	6,002.3	6,000.1	14.1	13.4	169.86	25.5	49.3	270.8	246.5	24.24	11.169		
6,100.0	6,048.1	6,113.5	6,107.2	14.6	13.6	167.08	53.2	37.9	304.1	279.7	24.47	12.430		
6,200.0	6,134.3	6,226.4	6,212.4	15.3	13.9	163.47	91.0	22.3	333.5	308.4	25.13	13.271		
6,300.0	6,220.5	6,339.2	6,312.9	16.0	14.3	159.02	138.1	2.8	358.6	332.7	25.97	13.812		
6,400.0	6,306.7	6,435.1	6,395.7	16.7	14.7	155.01	182.9	-15.7	382.4	355.5	26.91	14.209		
6,500.0	6,393.0	6,529.6	6,477.6	17.5	15.1	151.62	226.3	-34.0	407.8	379.8	27.95	14.589		
6,600.0	6,479.2	6,629.9	6,570.6	18.3	15.5	150.68	257.0	-54.9	433.4	404.6	28.79	15.053		
6,700.0	6,565.4	6,728.6	6,666.3	19.2	15.7	152.73	265.4	-76.4	458.3	429.0	29.22	15.686		
6,800.0	6,652.1	6,818.0	6,752.6	20.0	15.9	169.72	254.1	-95.9	484.4	455.3	29.10	16.645		
6,900.0	6,740.4	6,901.8	6,830.0	20.6	15.9	-159.22	227.4	-113.4	512.7	483.6	29.16	17.585		
7,000.0	6,826.4	6,982.2	6,898.3	21.2	16.0	-133.18	188.2	-129.0	541.1	511.4	29.70	18.219		
7,100.0	6,905.6	7,060.5	6,957.1	21.6	15.9	-115.20	138.4	-142.4	567.6	537.1	30.44	18.643		
7,200.0	6,974.0	7,137.5	7,005.6	21.9	15.9	-103.50	79.8	-153.5	590.3	559.2	31.10	18.980		
7,300.0	7,028.1	7,213.8	7,043.2	22.1	15.9	-96.10	14.1	-162.1	608.0	576.4	31.59	19.247		
7,400.0	7,065.1	7,289.8	7,069.1	22.3	16.0	-91.82	-57.1	-168.2	619.9	587.9	32.01	19.362		
7,500.0	7,083.1	7,365.8	7,082.6	22.4	16.2	-90.05	-131.7	-171.5	625.2	592.7	32.54	19.216		
7,600.0	7,084.7	7,452.3	7,084.7	22.5	16.6	-90.00	-218.1	-172.2	625.4	592.1	33.29	18.787		
7,700.0	7,084.7	7,552.3	7,084.7	22.7	17.3	-90.00	-318.1	-172.5	625.3	590.7	34.53	18.107		
7,800.0	7,084.7	7,652.3	7,084.7	23.1	18.1	-90.00	-418.1	-172.8	625.2	589.0	36.18	17.281		
7,900.0	7,084.7	7,752.3	7,084.7	23.6	19.1	-90.00	-518.1	-173.1	625.1	586.9	38.14	16.389		
8,000.0	7,084.7	7,852.3	7,084.7	24.3	20.2	-90.00	-618.1	-173.4	625.0	584.6	40.37	15.479		
8,100.0	7,084.7	7,952.3	7,084.7	25.2	21.5	-90.00	-718.1	-173.7	624.9	582.0	42.84	14.586		
8,200.0	7,084.7	8,052.3	7,084.7	26.2	22.8	-90.00	-818.1	-174.0	624.7	579.3	45.49	13.732		
8,300.0	7,084.7	8,152.3	7,084.7	27.3	24.2	-90.00	-918.1	-174.3	624.6	576.3	48.31	12.930		
8,400.0	7,084.7	8,252.3	7,084.7	28.6	25.7	-90.00	-1,018.1	-174.6	624.5	573.3	51.26	12.183		
8,500.0	7,084.7	8,352.3	7,084.7	29.9	27.2	-90.00	-1,118.1	-175.0	624.4	570.1	54.32	11.495		
8,600.0	7,084.7	8,452.3	7,084.7	31.3	28.8	-90.00	-1,218.1	-175.3	624.3	566.8	57.48	10.861		
8,700.0	7,084.7	8,552.3	7,084.7	32.8	30.4	-90.00	-1,318.1	-175.6	624.2	563.5	60.72	10.281		
8,800.0	7,084.7	8,652.3	7,084.7	34.3	32.1	-90.00	-1,418.1	-175.9	624.1	560.1	64.02	9.749		
8,900.0	7,084.7	8,752.3	7,084.7	35.9	33.8	-90.00	-1,518.1	-176.2	624.0	556.6	67.38	9.261		
9,000.0	7,084.7	8,852.3	7,084.7	37.4	35.5	-90.00	-1,618.1	-176.5	623.9	553.1	70.79	8.813		
9,100.0	7,084.7	8,952.3	7,084.7	39.1	37.2	-90.00	-1,718.1	-176.8	623.8	549.5	74.25	8.402		
9,200.0	7,084.7	9,052.3	7,084.7	40.7	38.9	-90.00	-1,818.1	-177.1	623.7	545.9	77.74	8.023		
9,300.0	7,084.7	9,152.3	7,084.7	42.4	40.7	-90.00	-1,918.1	-177.4	623.6	542.3	81.26	7.674		
9,400.0	7,084.7	9,252.3	7,084.7	44.1	42.5	-90.00	-2,018.1	-177.7	623.5	538.7	84.81	7.352		
9,500.0	7,084.7	9,352.3	7,084.7	45.8	44.3	-90.00	-2,118.1	-178.0	623.4	535.0	88.38	7.053		
9,600.0	7,084.7	9,452.3	7,084.7	47.6	46.1	-90.00	-2,218.1	-178.3	623.3	531.3	91.98	6.776		
9,700.0	7,084.7	9,552.3	7,084.7	49.3	47.9	-90.00	-2,318.1	-178.6	623.2	527.6	95.60	6.519		
9,800.0	7,084.7	9,652.3	7,084.7	51.1	49.7	-90.00	-2,418.1	-179.0	623.0	523.8	99.23	6.279		
9,900.0	7,084.7	9,752.3	7,084.7	52.8	51.5	-90.00	-2,518.1	-179.3	622.9	520.1	102.88	6.055		
10,000.0	7,084.7	9,852.3	7,084.7	54.6	53.3	-90.00	-2,618.1	-179.6	622.8	516.3	106.54	5.846		
10,100.0	7,084.7	9,952.3	7,084.7	56.4	55.2	-90.00	-2,718.1	-179.9	622.7	512.5	110.22	5.650		
10,200.0	7,084.7	10,052.3	7,084.7	58.2	57.0	-90.00	-2,818.1	-180.2	622.6	508.7	113.90	5.466		

Company:	Great Western	Local Co-ordinate Reference:	Well Gustafson EF 31-379HN
Project:	SEC.31-T7N-R65W	TVD Reference:	WELL @ 4844.7ft (Original Well Elev)
Reference Site:	Gustafson Pad Sec.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gustafson EF 31-379HN	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
10,300.0	7,084.7	10,152.3	7,084.7	60.0	58.9	-90.00	-2,918.1	-180.5	622.5	504.9	117.60	5.294	
10,400.0	7,084.7	10,252.3	7,084.7	61.8	60.7	-90.00	-3,018.1	-180.8	622.4	501.1	121.30	5.131	
10,500.0	7,084.7	10,352.3	7,084.7	63.7	62.6	-90.00	-3,118.1	-181.1	622.3	497.3	125.02	4.978	
10,600.0	7,084.7	10,452.3	7,084.7	65.5	64.4	-90.00	-3,218.1	-181.4	622.2	493.5	128.74	4.833	
10,700.0	7,084.7	10,552.3	7,084.7	67.3	66.3	-90.00	-3,318.1	-181.7	622.1	489.6	132.47	4.696	
10,800.0	7,084.7	10,652.3	7,084.7	69.2	68.2	-90.00	-3,418.1	-182.0	622.0	485.8	136.20	4.567	
10,900.0	7,084.7	10,752.3	7,084.7	71.0	70.0	-90.00	-3,518.1	-182.3	621.9	481.9	139.95	4.444	
11,000.0	7,084.7	10,852.3	7,084.7	72.8	71.9	-90.00	-3,618.1	-182.6	621.8	478.1	143.69	4.327	
11,100.0	7,084.7	10,952.3	7,084.7	74.7	73.8	-90.00	-3,718.1	-182.9	621.7	474.2	147.45	4.216	
11,200.0	7,084.7	11,052.3	7,084.7	76.5	75.7	-90.00	-3,818.1	-183.3	621.6	470.4	151.20	4.111	
11,300.0	7,084.7	11,152.3	7,084.7	78.4	77.5	-90.00	-3,918.1	-183.6	621.4	466.5	154.96	4.010	
11,400.0	7,084.7	11,252.3	7,084.7	80.3	79.4	-90.00	-4,018.1	-183.9	621.3	462.6	158.73	3.915	
11,500.0	7,084.7	11,352.3	7,084.7	82.1	81.3	-90.00	-4,118.1	-184.2	621.2	458.7	162.50	3.823	
11,600.0	7,084.7	11,452.3	7,084.7	84.0	83.2	-90.00	-4,218.1	-184.5	621.1	454.9	166.27	3.736	
11,700.0	7,084.7	11,552.3	7,084.7	85.9	85.1	-90.00	-4,318.1	-184.8	621.0	451.0	170.04	3.652	
11,800.0	7,084.7	11,652.3	7,084.7	87.7	87.0	-90.00	-4,418.1	-185.1	620.9	447.1	173.82	3.572	
11,895.7	7,084.7	11,748.0	7,084.7	89.6	88.6	-90.00	-4,513.7	-185.4	620.8	443.6	177.27	3.502	

Company:	Great Western	Local Co-ordinate Reference:	Well Gustafson EF 31-379HN
Project:	SEC.31-T7N-R65W	TVD Reference:	WELL @ 4844.7ft (Original Well Elev)
Reference Site:	Gustafson Pad Sec.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gustafson EF 31-379HN	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	92.09	-1.1	30.0	30.0					
100.0	100.0	100.0	100.0	0.1	0.1	92.09	-1.1	30.0	30.0	29.8	0.22	133.645		
200.0	200.0	200.0	200.0	0.3	0.3	92.09	-1.1	30.0	30.0	29.4	0.67	44.548		
300.0	300.0	300.0	300.0	0.6	0.6	92.09	-1.1	30.0	30.0	28.9	1.12	26.729		
400.0	400.0	400.0	400.0	0.8	0.8	92.09	-1.1	30.0	30.0	28.5	1.57	19.092		
500.0	500.0	500.0	500.0	1.0	1.0	92.09	-1.1	30.0	30.0	28.0	2.02	14.849		
600.0	600.0	600.0	600.0	1.2	1.2	92.09	-1.1	30.0	30.0	27.6	2.47	12.150		
700.0	700.0	700.0	700.0	1.5	1.5	92.09	-1.1	30.0	30.0	27.1	2.92	10.280		
800.0	800.0	800.0	800.0	1.7	1.7	92.09	-1.1	30.0	30.0	26.7	3.37	8.910		
900.0	900.0	900.0	900.0	1.9	1.9	92.09	-1.1	30.0	30.0	26.2	3.82	7.861		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	92.09	-1.1	30.0	30.0	25.8	4.27	7.034		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	92.09	-1.1	30.0	30.0	25.3	4.72	6.364		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	92.09	-1.1	30.0	30.0	24.9	5.17	5.811		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	92.09	-1.1	30.0	30.0	24.4	5.62	5.346		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	92.09	-1.1	30.0	30.0	24.0	6.07	4.950		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	92.09	-1.1	30.0	30.0	23.5	6.52	4.608		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	92.09	-1.1	30.0	30.0	23.1	6.97	4.311		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	92.09	-1.1	30.0	30.0	22.6	7.42	4.050		
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	92.09	-1.1	30.0	30.0	22.2	7.87	3.818		
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	92.09	-1.1	30.0	30.0	21.7	8.32	3.612		
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	92.09	-1.1	30.0	30.0	21.3	8.77	3.427		
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	92.09	-1.1	30.0	30.0	20.8	9.22	3.260		
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	92.09	-1.1	30.0	30.0	20.4	9.66	3.108		
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	92.09	-1.1	30.0	30.0	19.9	10.11	2.970		
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	92.09	-1.1	30.0	30.0	19.5	10.56	2.844		
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	92.09	-1.1	30.0	30.0	19.0	11.01	2.727		
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	92.09	-1.1	30.0	30.0	18.6	11.46	2.620		
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	92.09	-1.1	30.0	30.0	18.1	11.91	2.522		
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	92.09	-1.1	30.0	30.0	17.7	12.36	2.430		
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	92.09	-1.1	30.0	30.0	17.2	12.81	2.345		
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	92.09	-1.1	30.0	30.0	16.8	13.26	2.265		
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	92.09	-1.1	30.0	30.0	16.3	13.71	2.191		
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	92.09	-1.1	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	92.09	-1.1	30.0	30.0	15.4	14.61	2.056		
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	92.09	-1.1	30.0	30.0	15.0	15.06	1.995		
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	92.09	-1.1	30.0	30.0	14.5	15.51	1.937		
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	92.09	-1.1	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	92.09	-1.1	30.0	30.0	13.6	16.41	1.831		
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	92.09	-1.1	30.0	30.0	13.2	16.86	1.782		
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	92.09	-1.1	30.0	30.0	12.7	17.31	1.736		
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	92.09	-1.1	30.0	30.0	12.3	17.76	1.692		
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	92.09	-1.1	30.0	30.0	11.8	18.21	1.650		
4,200.0	4,200.0	4,200.0	4,200.0	9.3	9.3	92.09	-1.1	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	92.09	-1.1	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	92.09	-1.1	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	92.09	-1.1	30.0	30.0	10.0	20.00	1.502		
4,600.0	4,600.0	4,600.0	4,600.0	10.2	10.2	92.09	-1.1	30.0	30.0	9.6	20.45	1.469 Level 3		
4,700.0	4,700.0	4,700.0	4,700.0	10.5	10.5	92.09	-1.1	30.0	30.0	9.1	20.90	1.437 Level 3		
4,800.0	4,800.0	4,800.0	4,800.0	10.7	10.7	92.09	-1.1	30.0	30.0	8.7	21.35	1.407 Level 3		
4,900.0	4,900.0	4,900.0	4,900.0	10.9	10.9	92.09	-1.1	30.0	30.0	8.2	21.80	1.378 Level 3		
5,000.0	5,000.0	5,000.0	5,000.0	11.1	11.1	92.09	-1.1	30.0	30.0	7.8	22.25	1.350 Level 3, CC		
5,027.9	5,027.9	5,027.9	5,027.9	11.2	11.2	155.63	-1.1	30.0	30.1	7.8	22.38	1.347 Level 3, ES, SF		

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 31-379HN
Project:	SEC.31-T7N-R65W	TVD Reference:	WELL @ 4844.7ft (Original Well Elev)
Reference Site:	Gustafson Pad Sec.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gustafson EF 31-379HN	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:	0.0ft
Survey Program: 0-MWD													Offset Well Error:	0.0ft
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	5,100.0	5,100.0	11.3	11.4	156.05	-1.1	30.0	30.6	7.9	22.69	1.350	Level 3	
5,200.0	5,199.8	5,199.8	5,199.8	11.6	11.6	159.43	-1.1	30.0	35.5	12.4	23.08	1.537		
5,300.0	5,299.3	5,299.3	5,299.3	11.8	11.8	163.99	-1.1	30.0	45.4	22.0	23.41	1.940		
5,400.0	5,398.0	5,398.0	5,398.0	12.0	12.0	167.97	-1.1	30.0	60.6	36.9	23.68	2.560		
5,500.0	5,495.8	5,495.8	5,495.8	12.2	12.2	170.93	-1.1	30.0	81.1	57.2	23.89	3.394		
5,600.0	5,592.4	5,596.4	5,596.4	12.5	12.5	172.83	-0.1	28.8	105.3	81.3	24.05	4.381		
5,700.0	5,687.5	5,699.4	5,699.1	12.8	12.7	173.52	4.2	23.5	130.0	105.8	24.15	5.382		
5,800.0	5,780.9	5,803.6	5,802.6	13.2	12.9	173.54	12.1	13.6	154.6	130.4	24.21	6.389		
5,900.0	5,872.2	5,909.3	5,906.6	13.6	13.2	173.14	23.6	-0.8	179.3	155.1	24.22	7.403		
6,000.0	5,961.3	6,016.4	6,010.8	14.1	13.4	172.45	39.0	-20.0	203.9	179.7	24.21	8.423		
6,100.0	6,048.1	6,125.0	6,114.9	14.6	13.7	171.60	58.3	-44.1	228.1	203.7	24.36	9.363		
6,200.0	6,134.3	6,235.9	6,219.2	15.3	14.1	170.48	81.8	-73.4	248.1	223.2	24.88	9.972		
6,300.0	6,220.5	6,348.7	6,322.9	16.0	14.5	169.01	109.6	-108.1	262.8	237.3	25.45	10.326		
6,400.0	6,306.7	6,462.7	6,424.8	16.7	15.0	167.13	141.5	-147.9	272.2	246.1	26.09	10.431		
6,500.0	6,393.0	6,571.9	6,519.7	17.5	15.6	164.93	175.4	-190.2	276.8	249.9	26.82	10.318		
6,600.0	6,479.2	6,671.4	6,605.3	18.3	16.2	162.86	207.0	-229.6	280.5	252.9	27.61	10.159		
6,700.0	6,565.4	6,770.8	6,691.0	19.2	16.8	160.86	238.6	-269.0	284.6	256.1	28.49	9.989		
6,800.0	6,652.1	6,868.2	6,775.7	20.0	17.4	170.82	266.4	-308.0	289.1	259.7	29.39	9.837		
6,900.0	6,740.4	6,965.5	6,863.5	20.6	17.9	-166.11	275.2	-348.5	294.0	264.0	30.05	9.785		
7,000.0	6,826.4	7,064.8	6,952.7	21.2	18.4	-147.23	262.2	-389.7	299.1	268.7	30.39	9.840		
7,100.0	6,905.6	7,166.5	7,038.9	21.6	18.7	-135.36	226.5	-429.5	304.1	273.6	30.46	9.981		
7,200.0	6,974.0	7,270.6	7,117.1	21.9	18.9	-128.59	168.4	-465.7	308.6	278.3	30.37	10.162		
7,300.0	7,028.1	7,377.0	7,181.9	22.1	19.0	-124.90	89.9	-495.8	312.5	282.2	30.31	10.311		
7,400.0	7,065.1	7,485.5	7,228.5	22.3	19.1	-123.09	-5.3	-517.4	315.4	284.9	30.50	10.340		
7,500.0	7,083.1	7,595.5	7,252.8	22.4	19.3	-122.54	-111.7	-528.9	316.9	285.8	31.13	10.181		
7,600.0	7,084.7	7,700.7	7,255.7	22.5	19.5	-122.63	-216.8	-530.5	317.2	285.1	32.06	9.894		
7,700.0	7,084.7	7,800.7	7,255.7	22.7	19.9	-122.63	-316.8	-530.7	317.1	283.8	33.30	9.522		
7,800.0	7,084.7	7,900.7	7,255.7	23.1	20.5	-122.63	-416.8	-530.9	317.1	282.3	34.83	9.105		
7,900.0	7,084.7	8,000.7	7,255.7	23.6	21.2	-122.64	-516.8	-531.2	317.1	280.5	36.59	8.665		
8,000.0	7,084.7	8,100.7	7,255.7	24.3	22.2	-122.64	-616.8	-531.4	317.1	278.5	38.57	8.221		
8,100.0	7,084.7	8,200.7	7,255.7	25.2	23.3	-122.64	-716.8	-531.6	317.0	276.3	40.72	7.786		
8,200.0	7,084.7	8,300.7	7,255.7	26.2	24.5	-122.64	-816.8	-531.8	317.0	274.0	43.02	7.369		
8,300.0	7,084.7	8,400.7	7,255.7	27.3	25.8	-122.65	-916.8	-532.1	317.0	271.5	45.45	6.975		
8,400.0	7,084.7	8,500.7	7,255.7	28.6	27.2	-122.65	-1,016.8	-532.3	317.0	269.0	47.98	6.605		
8,500.0	7,084.7	8,600.7	7,255.7	29.9	28.6	-122.65	-1,116.8	-532.5	316.9	266.3	50.61	6.262		
8,600.0	7,084.7	8,700.7	7,255.7	31.3	30.1	-122.66	-1,216.8	-532.8	316.9	263.6	53.32	5.943		
8,700.0	7,084.7	8,800.7	7,255.7	32.8	31.7	-122.66	-1,316.8	-533.0	316.9	260.8	56.09	5.649		
8,800.0	7,084.7	8,900.7	7,255.7	34.3	33.2	-122.66	-1,416.8	-533.2	316.8	257.9	58.93	5.377		
8,900.0	7,084.7	9,000.7	7,255.7	35.9	34.9	-122.67	-1,516.8	-533.5	316.8	255.0	61.81	5.126		
9,000.0	7,084.7	9,100.7	7,255.7	37.4	36.5	-122.67	-1,616.8	-533.7	316.8	252.1	64.73	4.894		
9,100.0	7,084.7	9,200.7	7,255.7	39.1	38.2	-122.67	-1,716.8	-533.9	316.8	249.1	67.69	4.679		
9,200.0	7,084.7	9,300.7	7,255.7	40.7	39.9	-122.67	-1,816.8	-534.2	316.7	246.1	70.69	4.481		
9,300.0	7,084.7	9,400.7	7,255.7	42.4	41.6	-122.68	-1,916.8	-534.4	316.7	243.0	73.71	4.297		
9,400.0	7,084.7	9,500.7	7,255.7	44.1	43.3	-122.68	-2,016.8	-534.6	316.7	239.9	76.76	4.126		
9,500.0	7,084.7	9,600.7	7,255.7	45.8	45.1	-122.68	-2,116.8	-534.9	316.7	236.8	79.83	3.967		
9,600.0	7,084.7	9,700.7	7,255.7	47.6	46.8	-122.69	-2,216.8	-535.1	316.6	233.7	82.92	3.819		
9,700.0	7,084.7	9,800.7	7,255.7	49.3	48.6	-122.69	-2,316.8	-535.3	316.6	230.6	86.03	3.680		
9,800.0	7,084.7	9,900.7	7,255.7	51.1	50.4	-122.69	-2,416.8	-535.6	316.6	227.4	89.15	3.551		
9,900.0	7,084.7	10,000.7	7,255.7	52.8	52.2	-122.70	-2,516.8	-535.8	316.6	224.3	92.29	3.430		
10,000.0	7,084.7	10,100.7	7,255.7	54.6	54.0	-122.70	-2,616.8	-536.0	316.5	221.1	95.44	3.316		
10,100.0	7,084.7	10,200.7	7,255.7	56.4	55.8	-122.70	-2,716.8	-536.3	316.5	217.9	98.60	3.210		
10,200.0	7,084.7	10,300.7	7,255.7	58.2	57.6	-122.71	-2,816.8	-536.5	316.5	214.7	101.78	3.110		

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 31-379HN
Project:	SEC.31-T7N-R65W	TVD Reference:	WELL @ 4844.7ft (Original Well Elev)
Reference Site:	Gustafson Pad Sec.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gustafson EF 31-379HN	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
10,300.0	7,084.7	10,400.7	7,255.7	60.0	59.5	-122.71	-2,916.8	-536.7	316.5	211.5	104.96	3.015	
10,400.0	7,084.7	10,500.7	7,255.7	61.8	61.3	-122.71	-3,016.8	-537.0	316.4	208.3	108.15	2.926	
10,500.0	7,084.7	10,600.7	7,255.7	63.7	63.1	-122.71	-3,116.8	-537.2	316.4	205.1	111.35	2.842	
10,600.0	7,084.7	10,700.7	7,255.7	65.5	65.0	-122.72	-3,216.8	-537.4	316.4	201.8	114.55	2.762	
10,700.0	7,084.7	10,800.7	7,255.7	67.3	66.8	-122.72	-3,316.8	-537.7	316.4	198.6	117.77	2.686	
10,800.0	7,084.7	10,900.7	7,255.7	69.2	68.7	-122.72	-3,416.8	-537.9	316.3	195.3	120.99	2.615	
10,900.0	7,084.7	11,000.7	7,255.7	71.0	70.5	-122.73	-3,516.8	-538.1	316.3	192.1	124.21	2.546	
11,000.0	7,084.7	11,100.7	7,255.7	72.8	72.4	-122.73	-3,616.8	-538.3	316.3	188.8	127.44	2.482	
11,100.0	7,084.7	11,200.7	7,255.7	74.7	74.2	-122.73	-3,716.8	-538.6	316.2	185.6	130.67	2.420	
11,200.0	7,084.7	11,300.7	7,255.7	76.5	76.1	-122.74	-3,816.8	-538.8	316.2	182.3	133.91	2.361	
11,300.0	7,084.7	11,400.7	7,255.7	78.4	78.0	-122.74	-3,916.8	-539.0	316.2	179.0	137.15	2.305	
11,400.0	7,084.7	11,500.7	7,255.7	80.3	79.9	-122.74	-4,016.8	-539.3	316.2	175.8	140.40	2.252	
11,500.0	7,084.7	11,600.7	7,255.7	82.1	81.7	-122.74	-4,116.8	-539.5	316.1	172.5	143.65	2.201	
11,600.0	7,084.7	11,700.7	7,255.7	84.0	83.6	-122.75	-4,216.8	-539.7	316.1	169.2	146.90	2.152	
11,700.0	7,084.7	11,800.7	7,255.7	85.9	85.5	-122.75	-4,316.8	-540.0	316.1	165.9	150.16	2.105	
11,800.0	7,084.7	11,900.7	7,255.7	87.7	87.4	-122.75	-4,416.8	-540.2	316.1	162.6	153.41	2.060	
11,895.7	7,084.7	11,996.4	7,255.7	89.6	89.2	-122.76	-4,512.5	-540.4	316.0	159.5	156.53	2.019	

Gustafson Pad Sec.31-T7N-R65W - Gustafson EF 31-380HN - 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	
0.0	0.0	0.0	0.0	0.0	0.0	-87.93	1.1	-30.0	30.0					
100.0	100.0	100.0	100.0	0.1	0.1	-87.93	1.1	-30.0	30.0	29.8	0.22	133.643		
200.0	200.0	200.0	200.0	0.3	0.3	-87.93	1.1	-30.0	30.0	29.4	0.67	44.548		
300.0	300.0	300.0	300.0	0.6	0.6	-87.93	1.1	-30.0	30.0	28.9	1.12	26.729		
400.0	400.0	400.0	400.0	0.8	0.8	-87.93	1.1	-30.0	30.0	28.5	1.57	19.092		
500.0	500.0	500.0	500.0	1.0	1.0	-87.93	1.1	-30.0	30.0	28.0	2.02	14.849		
600.0	600.0	600.0	600.0	1.2	1.2	-87.93	1.1	-30.0	30.0	27.6	2.47	12.149		
700.0	700.0	700.0	700.0	1.5	1.5	-87.93	1.1	-30.0	30.0	27.1	2.92	10.280		
800.0	800.0	800.0	800.0	1.7	1.7	-87.93	1.1	-30.0	30.0	26.7	3.37	8.910		
900.0	900.0	900.0	900.0	1.9	1.9	-87.93	1.1	-30.0	30.0	26.2	3.82	7.861		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-87.93	1.1	-30.0	30.0	25.8	4.27	7.034		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-87.93	1.1	-30.0	30.0	25.3	4.72	6.364		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-87.93	1.1	-30.0	30.0	24.9	5.17	5.811		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-87.93	1.1	-30.0	30.0	24.4	5.62	5.346		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-87.93	1.1	-30.0	30.0	24.0	6.07	4.950		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-87.93	1.1	-30.0	30.0	23.5	6.52	4.608		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	-87.93	1.1	-30.0	30.0	23.1	6.97	4.311		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	-87.93	1.1	-30.0	30.0	22.6	7.42	4.050		
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-87.93	1.1	-30.0	30.0	22.2	7.87	3.818		
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	-87.93	1.1	-30.0	30.0	21.7	8.32	3.612		
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	-87.93	1.1	-30.0	30.0	21.3	8.77	3.427		
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	-87.93	1.1	-30.0	30.0	20.8	9.22	3.260		
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	-87.93	1.1	-30.0	30.0	20.4	9.66	3.108		
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	-87.93	1.1	-30.0	30.0	19.9	10.11	2.970		
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	-87.93	1.1	-30.0	30.0	19.5	10.56	2.843		
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	-87.93	1.1	-30.0	30.0	19.0	11.01	2.727		
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	-87.93	1.1	-30.0	30.0	18.6	11.46	2.620		
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	-87.93	1.1	-30.0	30.0	18.1	11.91	2.522		
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	-87.93	1.1	-30.0	30.0	17.7	12.36	2.430		
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	-87.93	1.1	-30.0	30.0	17.2	12.81	2.345		
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	-87.93	1.1	-30.0	30.0	16.8	13.26	2.265		
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	-87.93	1.1	-30.0	30.0	16.3	13.71	2.191		
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	-87.93	1.1	-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	-87.93	1.1	-30.0	30.0	15.4	14.61	2.056		
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	-87.93	1.1	-30.0	30.0	15.0	15.06	1.995		
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	-87.93	1.1	-30.0	30.0	14.5	15.51	1.937		
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	-87.93	1.1	-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	-87.93	1.1	-30.0	30.0	13.6	16.41	1.831		
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	-87.93	1.1	-30.0	30.0	13.2	16.86	1.782		
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	-87.93	1.1	-30.0	30.0	12.7	17.31	1.736		
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	-87.93	1.1	-30.0	30.0	12.3	17.76	1.692		
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	-87.93	1.1	-30.0	30.0	11.8	18.21	1.650		
4,200.0	4,200.0	4,200.0	4,200.0	9.3	9.3	-87.93	1.1	-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	-87.93	1.1	-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	-87.93	1.1	-30.0	30.0	10.5	19.55	1.536	CC, ES, SF	
4,500.0	4,500.0	4,498.4	4,498.4	10.0	10.0	-86.82	1.8	-32.4	32.5	12.5	19.99	1.628		
4,600.0	4,600.0	4,596.3	4,596.0	10.2	10.2	-84.33	3.9	-39.7	40.1	19.7	20.42	1.963		
4,700.0	4,700.0	4,693.2	4,692.0	10.5	10.4	-81.78	7.5	-51.6	52.7	31.8	20.86	2.527		
4,800.0	4,800.0	4,788.5	4,785.9	10.7	10.6	-79.76	12.3	-67.8	70.3	49.0	21.30	3.302		
4,900.0	4,900.0	4,882.0	4,876.9	10.9	10.9	-78.30	18.2	-88.0	92.8	71.1	21.75	4.267		
5,000.0	5,000.0	4,973.1	4,964.6	11.1	11.1	-77.27	25.3	-111.9	120.0	97.8	22.22	5.402		
5,100.0	5,100.0	5,061.9	5,048.7	11.3	11.4	-13.01	33.3	-138.9	151.2	128.7	22.50	6.720		

COMPASS 2003.21 Build 46

Company:	Great Western	Local Co-ordinate Reference:	Well Gustafson EF 31-379HN
Project:	SEC.31-T7N-R65W	TVD Reference:	WELL @ 4844.7ft (Original Well Elev)
Reference Site:	Gustafson Pad Sec.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gustafson EF 31-379HN	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	5,199.8	5,149.2	5,130.2	11.6	11.7	-12.59	42.2	-169.2	182.4	159.6	22.84	7.986	
5,300.0	5,299.3	5,235.5	5,209.1	11.8	12.1	-12.48	52.1	-202.5	213.2	190.0	23.14	9.210	
5,400.0	5,398.0	5,320.7	5,285.4	12.0	12.5	-12.56	62.8	-238.7	243.3	219.9	23.40	10.397	
5,500.0	5,495.8	5,404.8	5,359.1	12.2	13.0	-12.76	74.3	-277.7	272.8	249.2	23.61	11.553	
5,600.0	5,592.4	5,497.6	5,438.8	12.5	13.6	-13.11	87.7	-323.2	300.5	276.7	23.81	12.621	
5,700.0	5,687.5	5,594.8	5,522.3	12.8	14.4	-13.63	101.9	-371.0	323.4	299.4	23.98	13.485	
5,800.0	5,780.9	5,693.1	5,606.7	13.2	15.1	-14.32	116.1	-419.3	341.5	317.3	24.15	14.141	
5,900.0	5,872.2	5,792.0	5,691.7	13.6	15.9	-15.18	130.5	-467.9	354.6	330.3	24.30	14.588	
6,000.0	5,961.3	5,891.4	5,777.0	14.1	16.8	-16.23	145.0	-516.7	362.7	338.3	24.47	14.823	
6,100.0	6,048.1	5,991.0	5,862.6	14.6	17.7	-17.50	159.4	-565.7	366.4	341.6	24.83	14.758	
6,200.0	6,134.3	6,090.6	5,948.1	15.3	18.6	-18.82	173.9	-614.6	369.2	343.7	25.52	14.470	
6,300.0	6,220.5	6,190.2	6,033.6	16.0	19.6	-20.12	188.4	-663.6	372.2	345.9	26.26	14.174	
6,400.0	6,306.7	6,289.8	6,119.1	16.7	20.5	-21.40	202.8	-712.5	375.4	348.3	27.07	13.870	
6,500.0	6,393.0	6,389.4	6,204.7	17.5	21.5	-22.66	217.3	-761.5	378.8	350.8	27.94	13.559	
6,600.0	6,479.2	6,489.0	6,290.2	18.3	22.5	-23.89	231.8	-810.4	382.3	353.5	28.87	13.243	
6,700.0	6,565.4	6,588.6	6,375.7	19.2	23.5	-25.10	246.2	-859.4	386.1	356.2	29.87	12.924	
6,800.0	6,652.1	6,688.4	6,461.4	20.0	24.6	-14.60	260.7	-908.4	389.8	359.0	30.82	12.648	
6,900.0	6,740.4	6,787.0	6,546.0	20.6	25.6	11.44	275.1	-956.8	392.9	361.8	31.09	12.636	
7,000.0	6,826.4	6,879.7	6,625.7	21.2	26.6	35.87	288.5	-1,002.4	397.4	366.3	31.10	12.777	
7,100.0	6,905.6	6,975.3	6,708.2	21.6	27.5	54.63	296.8	-1,049.7	407.8	376.4	31.45	12.968	
7,200.0	6,974.0	7,088.9	6,805.5	21.9	28.4	68.38	280.5	-1,105.4	424.0	391.8	32.13	13.196	
7,300.0	7,028.1	7,227.0	6,914.0	22.1	29.2	78.75	223.3	-1,167.6	443.0	410.2	32.79	13.508	
7,400.0	7,065.1	7,398.2	7,018.8	22.3	29.9	86.26	103.7	-1,227.9	460.0	426.7	33.26	13.831	
7,500.0	7,083.1	7,600.8	7,081.2	22.4	30.2	89.88	-83.8	-1,263.9	468.6	434.6	33.92	13.813	
7,600.0	7,084.7	7,732.4	7,084.7	22.5	30.3	90.00	-215.2	-1,266.2	468.7	433.9	34.80	13.467	
7,700.0	7,084.7	7,832.4	7,084.7	22.7	30.4	90.00	-315.2	-1,266.4	468.7	432.6	36.02	13.011	
7,800.0	7,084.7	7,932.4	7,084.7	23.1	30.6	90.00	-415.2	-1,266.6	468.7	431.1	37.59	12.466	
7,900.0	7,084.7	8,032.4	7,084.7	23.6	30.9	90.00	-515.2	-1,266.8	468.7	429.2	39.48	11.870	
8,000.0	7,084.7	8,132.4	7,084.7	24.3	31.3	90.00	-615.2	-1,267.0	468.7	427.0	41.64	11.255	
8,100.0	7,084.7	8,232.4	7,084.7	25.2	31.8	90.00	-715.2	-1,267.2	468.7	424.6	44.03	10.644	
8,200.0	7,084.7	8,332.4	7,084.7	26.2	32.4	90.00	-815.2	-1,267.4	468.7	422.0	46.62	10.054	
8,300.0	7,084.7	8,432.4	7,084.7	27.3	33.1	90.00	-915.2	-1,267.6	468.7	419.3	49.36	9.494	
8,400.0	7,084.7	8,532.4	7,084.7	28.6	33.9	90.00	-1,015.2	-1,267.8	468.7	416.4	52.25	8.969	
8,500.0	7,084.7	8,632.4	7,084.7	29.9	34.8	90.00	-1,115.2	-1,268.0	468.7	413.4	55.26	8.482	
8,600.0	7,084.7	8,732.4	7,084.7	31.3	35.9	90.00	-1,215.2	-1,268.2	468.7	410.3	58.36	8.031	
8,700.0	7,084.7	8,832.4	7,084.7	32.8	37.0	90.00	-1,315.2	-1,268.5	468.7	407.1	61.55	7.615	
8,800.0	7,084.7	8,932.4	7,084.7	34.3	38.2	90.00	-1,415.2	-1,268.7	468.7	403.9	64.81	7.232	
8,900.0	7,084.7	9,032.4	7,084.7	35.9	39.5	90.00	-1,515.2	-1,268.9	468.7	400.5	68.13	6.879	
9,000.0	7,084.7	9,132.4	7,084.7	37.4	40.9	90.00	-1,615.2	-1,269.1	468.7	397.2	71.50	6.555	
9,100.0	7,084.7	9,232.4	7,084.7	39.1	42.3	90.00	-1,715.2	-1,269.3	468.7	393.8	74.92	6.256	
9,200.0	7,084.7	9,332.4	7,084.7	40.7	43.8	90.00	-1,815.2	-1,269.5	468.7	390.3	78.38	5.980	
9,300.0	7,084.7	9,432.4	7,084.7	42.4	45.3	90.00	-1,915.2	-1,269.7	468.7	386.8	81.87	5.725	
9,400.0	7,084.7	9,532.4	7,084.7	44.1	46.9	90.00	-2,015.2	-1,269.9	468.7	383.3	85.39	5.489	
9,500.0	7,084.7	9,632.4	7,084.7	45.8	48.5	90.00	-2,115.2	-1,270.1	468.7	379.7	88.94	5.270	
9,600.0	7,084.7	9,732.4	7,084.7	47.6	50.1	90.00	-2,215.2	-1,270.3	468.7	376.2	92.52	5.066	
9,700.0	7,084.7	9,832.4	7,084.7	49.3	51.7	90.00	-2,315.2	-1,270.5	468.7	372.6	96.11	4.877	
9,800.0	7,084.7	9,932.4	7,084.7	51.1	53.4	90.00	-2,415.2	-1,270.7	468.7	369.0	99.72	4.700	
9,900.0	7,084.7	10,032.4	7,084.7	52.8	55.1	90.00	-2,515.2	-1,270.9	468.7	365.3	103.35	4.535	
10,000.0	7,084.7	10,132.4	7,084.7	54.6	56.8	90.00	-2,615.2	-1,271.1	468.7	361.7	107.00	4.380	
10,100.0	7,084.7	10,232.4	7,084.7	56.4	58.5	90.00	-2,715.2	-1,271.3	468.7	358.0	110.66	4.236	
10,200.0	7,084.7	10,332.4	7,084.7	58.2	60.2	90.00	-2,815.2	-1,271.5	468.7	354.4	114.33	4.100	
10,300.0	7,084.7	10,432.4	7,084.7	60.0	62.0	90.00	-2,915.2	-1,271.7	468.7	350.7	118.01	3.972	

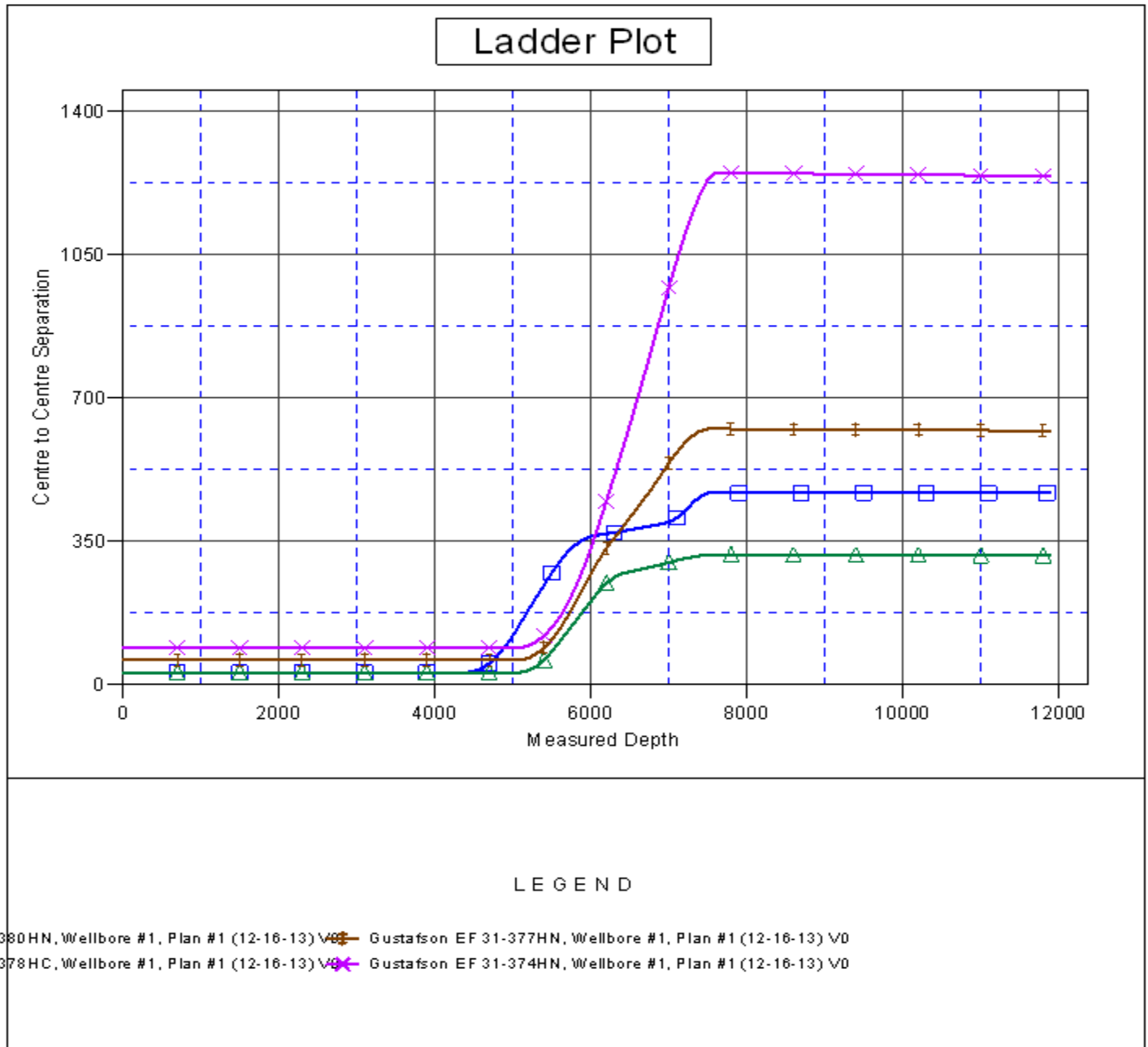
CC - Min centre to center distance or convergent point, SF - min separation factor, ES - min ellipse separation

Company:	Great Western	Local Co-ordinate Reference:	Well Gustafson EF 31-379HN
Project:	SEC.31-T7N-R65W	TVD Reference:	WELL @ 4844.7ft (Original Well Elev)
Reference Site:	Gustafson Pad Sec.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gustafson EF 31-379HN	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 31-380HN - 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	10,532.4	7,084.7	61.8	63.7	90.00	-3,015.2	-1,271.9	468.7	347.0	121.70	3.851	
10,500.0	7,084.7	10,632.4	7,084.7	63.7	65.5	90.00	-3,115.2	-1,272.1	468.7	343.3	125.40	3.738	
10,600.0	7,084.7	10,732.4	7,084.7	65.5	67.2	90.00	-3,215.2	-1,272.3	468.7	339.6	129.11	3.630	
10,700.0	7,084.7	10,832.4	7,084.7	67.3	69.0	90.00	-3,315.2	-1,272.5	468.7	335.9	132.83	3.529	
10,800.0	7,084.7	10,932.4	7,084.7	69.2	70.8	90.00	-3,415.2	-1,272.7	468.7	332.2	136.56	3.432	
10,900.0	7,084.7	11,032.4	7,084.7	71.0	72.6	90.00	-3,515.2	-1,272.9	468.7	328.4	140.29	3.341	
11,000.0	7,084.7	11,132.4	7,084.7	72.8	74.4	90.00	-3,615.2	-1,273.1	468.7	324.7	144.02	3.254	
11,100.0	7,084.7	11,232.4	7,084.7	74.7	76.2	90.00	-3,715.2	-1,273.3	468.7	320.9	147.77	3.172	
11,200.0	7,084.7	11,332.4	7,084.7	76.5	78.0	90.00	-3,815.2	-1,273.5	468.7	317.2	151.52	3.094	
11,300.0	7,084.7	11,432.4	7,084.7	78.4	79.9	90.00	-3,915.2	-1,273.7	468.7	313.5	155.27	3.019	
11,400.0	7,084.7	11,532.4	7,084.7	80.3	81.7	90.00	-4,015.2	-1,273.9	468.7	309.7	159.03	2.947	
11,500.0	7,084.7	11,632.4	7,084.7	82.1	83.5	90.00	-4,115.2	-1,274.1	468.7	305.9	162.79	2.879	
11,600.0	7,084.7	11,732.4	7,084.7	84.0	85.4	90.00	-4,215.2	-1,274.3	468.7	302.2	166.55	2.814	
11,700.0	7,084.7	11,832.4	7,084.7	85.9	87.2	90.00	-4,315.2	-1,274.5	468.7	298.4	170.32	2.752	
11,800.0	7,084.7	11,932.4	7,084.7	87.7	89.0	90.00	-4,415.2	-1,274.7	468.7	294.6	174.09	2.692	
11,853.8	7,084.7	11,986.2	7,084.7	88.8	90.0	90.00	-4,469.0	-1,274.8	468.7	292.6	176.12	2.661	
11,895.7	7,084.7	12,016.5	7,084.7	89.6	90.6	90.00	-4,499.3	-1,274.9	468.9	291.4	177.48	2.642	

Company:	Great Western	Local Co-ordinate Reference:	Well Gustafson EF 31-379HN
Project:	SEC.31-T7N-R65W	TVD Reference:	WELL @ 4844.7ft (Original Well Elev)
Reference Site:	Gustafson Pad Sec.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gustafson EF 31-379HN	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 (Original Well Elev) Coordinates are relative to: Gustafson EF 31-379HN
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000 °
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.51°



Company:	Great Western	Local Co-ordinate Reference:	Well Gustafson EF 31-379HN
Project:	SEC.31-T7N-R65W	TVD Reference:	WELL @ 4844.7ft (Original Well Elev)
Reference Site:	Gustafson Pad Sec.31-T7N-R65W	MD Reference:	WELL @ 4844.7ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Gustafson EF 31-379HN	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
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Reference Depths are relative to WELL @ 4844.7ft (Original Well Elev) Coordinates are relative to: Gustafson EF 31-379HN
Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
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