Great Western

Well Name: **Gustafson EF 31-372HN**

Surface Location: Gustafson Pad Sec.31-T7N-R65W

North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

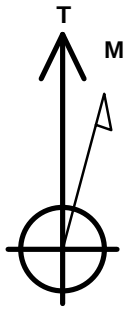
Ground Elevation: 4828.2

+N/-S	+E/-W	Northing	Easting	Latittude	Longitude	Slot
0.0	0.0	1439919.68	3219362.97	40.538300	-104.710750	

RKB - 16.5 WELL @ 4844.7ft (RKB - 16.5)

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 280'FNL & 1417'FWL	1.0	0.0	0.0	Point
BHL 470'FSL & 2333'FWL	7084.7	-4558.0	905.7	Point
Entry Pt. 460'FNL & 2348'FWL	7084.7	-206.5	929.5	Point



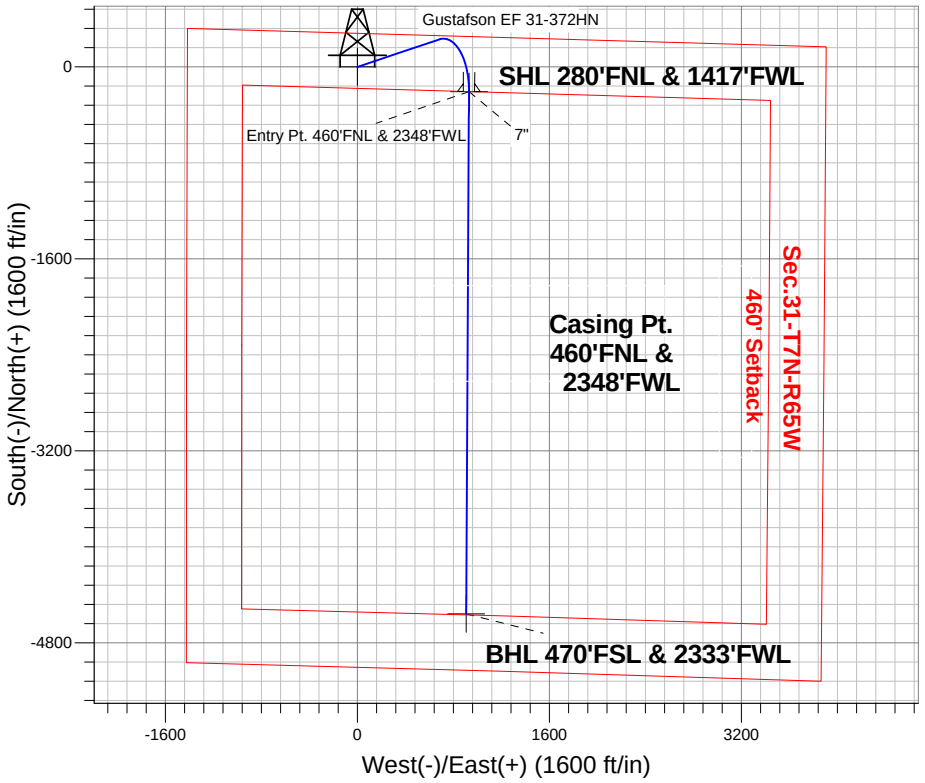
Azimuths to True North
Magnetic North: 8.51°

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

Gustafson Pad Sec.31-T7N-R65W
Gustafson EF 31-372HN
Plan #1 (12-16-13)
13:39, December 18 2013

ANNOTATIONS

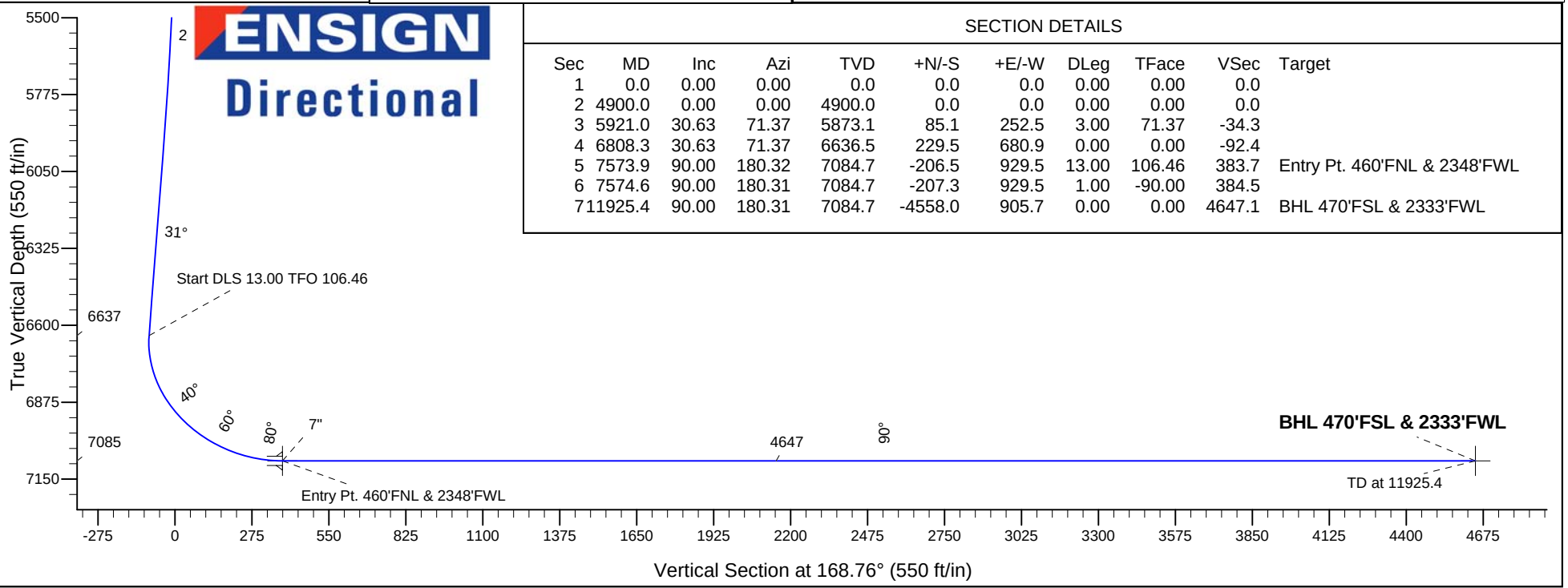
TVD	MD	Annotation
4900.0	4900.0	KOP - Start Build 3.00
6636.5	6808.3	Start DLS 13.00 TFO 106.46
7084.7	11925.4	TD at 11925.4



ENSIGN Directional

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	4900.0	0.00	0.00	4900.0	0.0	0.0	0.00	0.00	0.0	
3	5921.0	30.63	71.37	5873.1	85.1	252.5	3.00	71.37	-34.3	
4	6808.3	30.63	71.37	6636.5	229.5	680.9	0.00	0.00	-92.4	
5	7573.9	90.00	180.32	7084.7	-206.5	929.5	13.00	106.46	383.7	Entry Pt. 460'FNL & 2348'FWL
6	7574.6	90.00	180.31	7084.7	-207.3	929.5	1.00	-90.00	384.5	
7	11925.4	90.00	180.31	7084.7	-4558.0	905.7	0.00	0.00	4647.1	BHL 470'FSL & 2333'FWL



Great Western

SEC.31-T7N-R65W
Gustafson Pad Sec.31-T7N-R65W
Gustafson EF 31-372HN

Wellbore #1

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

Standard Planning Report

18 December, 2013

Database:	Landmark	**Local Co-ordinate Reference:**	Well Gustafson EF 31-372HN
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 31-372HN	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (12-16-13)		

Project SEC.31-T7N-R65W, Weld County, Colorado

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site Gustafson Pad Sec.31-T7N-R65W

Site Position:		**Northing:**	1,439,923.19 ft	**Latitude:**	40.538314
From:	Lat/Long	**Easting:**	3,219,183.10 ft	**Longitude:**	-104.711397
Position Uncertainty:	0.0 ft	**Slot Radius:**	"	**Grid Convergence:**	0.51 °

Well Gustafson EF 31-372HN

Well Position	**+N/-S**	-5.1 ft	**Northing:**	1,439,919.68 ft	**Latitude:**	40.538300
	+E/-W	179.8 ft	**Easting:**	3,219,362.97 ft	**Longitude:**	-104.710750
Position Uncertainty		0.0 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,828.2 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/16/2013	8.51	67.08	52,945

Design Plan #1 (12-16-13)

Audit Notes:

Version:		**Phase:**	PROTOTYPE	**Tie On Depth:**	0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	168.76

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	
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,921.0	30.63	71.37	5,873.1	85.1	252.5	3.00	3.00	0.00	71.37	
6,808.3	30.63	71.37	6,636.5	229.5	680.9	0.00	0.00	0.00	0.00	
7,573.9	90.00	180.32	7,084.7	-206.5	929.5	13.00	7.75	14.23	106.46	Entry Pt. 460'FNL &
7,574.6	90.00	180.31	7,084.7	-207.3	929.5	1.00	0.00	-1.00	-90.00	
11,925.4	90.00	180.31	7,084.7	-4,558.0	905.7	0.00	0.00	0.00	0.00	BHL 470'FSL & 233

Database:	Landmark	**Local Co-ordinate Reference:**	Well Gustafson EF 31-372HN
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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 31-372HN	**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 & 1417'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
KOP - Start Build 3.00									
5,000.0	3.00	71.37	5,000.0	0.8	2.5	-0.3	3.00	3.00	0.00

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Site:	Gustafson Pad Sec.31-T7N-R65W	**North Reference:**	True
Well:	Gustafson EF 31-372HN	**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)
5,100.0	6.00	71.37	5,099.6	3.3	9.9	-1.3	3.00	3.00	0.00
5,200.0	9.00	71.37	5,198.8	7.5	22.3	-3.0	3.00	3.00	0.00
5,300.0	12.00	71.37	5,297.1	13.3	39.5	-5.4	3.00	3.00	0.00
5,400.0	15.00	71.37	5,394.3	20.8	61.7	-8.4	3.00	3.00	0.00
5,500.0	18.00	71.37	5,490.2	29.9	88.6	-12.0	3.00	3.00	0.00
5,600.0	21.00	71.37	5,584.4	40.5	120.2	-16.3	3.00	3.00	0.00
5,700.0	24.00	71.37	5,676.8	52.7	156.5	-21.2	3.00	3.00	0.00
5,800.0	27.00	71.37	5,767.1	66.5	197.3	-26.8	3.00	3.00	0.00
5,900.0	30.00	71.37	5,854.9	81.7	242.5	-32.9	3.00	3.00	0.00
5,921.0	30.63	71.37	5,873.1	85.1	252.5	-34.3	3.00	3.00	0.00
6,000.0	30.63	71.37	5,941.0	98.0	290.7	-39.4	0.00	0.00	0.00
6,100.0	30.63	71.37	6,027.1	114.2	338.9	-46.0	0.00	0.00	0.00
6,200.0	30.63	71.37	6,113.1	130.5	387.2	-52.5	0.00	0.00	0.00
6,300.0	30.63	71.37	6,199.2	146.8	435.5	-59.1	0.00	0.00	0.00
6,400.0	30.63	71.37	6,285.2	163.1	483.8	-65.7	0.00	0.00	0.00
6,500.0	30.63	71.37	6,371.3	179.3	532.1	-72.2	0.00	0.00	0.00
6,600.0	30.63	71.37	6,457.3	195.6	580.3	-78.8	0.00	0.00	0.00
6,700.0	30.63	71.37	6,543.4	211.9	628.6	-85.3	0.00	0.00	0.00
6,800.0	30.63	71.37	6,629.4	228.2	676.9	-91.9	0.00	0.00	0.00
6,808.3	30.63	71.37	6,636.5	229.5	680.9	-92.4	0.00	0.00	0.00
Start DLS 13.00 TFO 106.46									
6,900.0	29.34	95.22	6,716.3	235.0	725.6	-89.0	13.00	-1.41	26.01
7,000.0	32.74	119.73	6,802.3	219.3	773.7	-64.3	13.00	3.40	24.51
7,100.0	39.87	138.21	6,883.0	181.8	818.7	-18.7	13.00	7.13	18.49
7,200.0	49.12	151.32	6,954.5	124.5	858.4	45.2	13.00	9.25	13.11
7,300.0	59.48	161.04	7,012.8	50.3	890.7	124.3	13.00	10.36	9.72
7,400.0	70.41	168.82	7,055.2	-37.1	913.9	214.5	13.00	10.93	7.78
7,500.0	81.63	175.59	7,079.3	-133.0	926.9	311.1	13.00	11.22	6.77
7,573.9	90.00	180.32	7,084.7	-206.5	929.5	383.7	12.99	11.32	6.39
7" - Entry Pt. 460'FNL & 2348'FWL									
7,574.6	90.00	180.31	7,084.7	-207.3	929.5	384.5	0.91	0.65	-0.64
7,600.0	90.00	180.31	7,084.7	-232.7	929.3	409.3	0.00	0.00	0.00
7,700.0	90.00	180.31	7,084.7	-332.7	928.8	507.3	0.00	0.00	0.00
7,800.0	90.00	180.31	7,084.7	-432.7	928.2	605.3	0.00	0.00	0.00
7,900.0	90.00	180.31	7,084.7	-532.7	927.7	703.3	0.00	0.00	0.00
8,000.0	90.00	180.31	7,084.7	-632.7	927.2	801.2	0.00	0.00	0.00
8,100.0	90.00	180.31	7,084.7	-732.7	926.6	899.2	0.00	0.00	0.00
8,200.0	90.00	180.31	7,084.7	-832.7	926.1	997.2	0.00	0.00	0.00
8,300.0	90.00	180.31	7,084.7	-932.7	925.5	1,095.2	0.00	0.00	0.00
8,400.0	90.00	180.31	7,084.7	-1,032.7	925.0	1,193.1	0.00	0.00	0.00
8,500.0	90.00	180.31	7,084.7	-1,132.7	924.4	1,291.1	0.00	0.00	0.00
8,600.0	90.00	180.31	7,084.7	-1,232.7	923.9	1,389.1	0.00	0.00	0.00
8,700.0	90.00	180.31	7,084.7	-1,332.7	923.3	1,487.1	0.00	0.00	0.00
8,800.0	90.00	180.31	7,084.7	-1,432.7	922.8	1,585.0	0.00	0.00	0.00
8,900.0	90.00	180.31	7,084.7	-1,532.7	922.2	1,683.0	0.00	0.00	0.00
9,000.0	90.00	180.31	7,084.7	-1,632.7	921.7	1,781.0	0.00	0.00	0.00
9,100.0	90.00	180.31	7,084.7	-1,732.7	921.1	1,879.0	0.00	0.00	0.00
9,200.0	90.00	180.31	7,084.7	-1,832.7	920.6	1,976.9	0.00	0.00	0.00
9,300.0	90.00	180.31	7,084.7	-1,932.7	920.1	2,074.9	0.00	0.00	0.00
9,400.0	90.00	180.31	7,084.7	-2,032.7	919.5	2,172.9	0.00	0.00	0.00
9,500.0	90.00	180.31	7,084.7	-2,132.7	919.0	2,270.9	0.00	0.00	0.00
9,600.0	90.00	180.31	7,084.7	-2,232.7	918.4	2,368.8	0.00	0.00	0.00
9,700.0	90.00	180.31	7,084.7	-2,332.7	917.9	2,466.8	0.00	0.00	0.00
9,800.0	90.00	180.31	7,084.7	-2,432.6	917.3	2,564.8	0.00	0.00	0.00

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Site:	Gustafson Pad Sec.31-T7N-R65W	**North Reference:**	True
Well:	Gustafson EF 31-372HN	**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)
9,900.0	90.00	180.31	7,084.7	-2,532.6	916.8	2,662.8	0.00	0.00	0.00
10,000.0	90.00	180.31	7,084.7	-2,632.6	916.2	2,760.7	0.00	0.00	0.00
10,100.0	90.00	180.31	7,084.7	-2,732.6	915.7	2,858.7	0.00	0.00	0.00
10,200.0	90.00	180.31	7,084.7	-2,832.6	915.1	2,956.7	0.00	0.00	0.00
10,300.0	90.00	180.31	7,084.7	-2,932.6	914.6	3,054.7	0.00	0.00	0.00
10,400.0	90.00	180.31	7,084.7	-3,032.6	914.1	3,152.6	0.00	0.00	0.00
10,500.0	90.00	180.31	7,084.7	-3,132.6	913.5	3,250.6	0.00	0.00	0.00
10,600.0	90.00	180.31	7,084.7	-3,232.6	913.0	3,348.6	0.00	0.00	0.00
10,700.0	90.00	180.31	7,084.7	-3,332.6	912.4	3,446.6	0.00	0.00	0.00
10,800.0	90.00	180.31	7,084.7	-3,432.6	911.9	3,544.5	0.00	0.00	0.00
10,900.0	90.00	180.31	7,084.7	-3,532.6	911.3	3,642.5	0.00	0.00	0.00
11,000.0	90.00	180.31	7,084.7	-3,632.6	910.8	3,740.5	0.00	0.00	0.00
11,100.0	90.00	180.31	7,084.7	-3,732.6	910.2	3,838.5	0.00	0.00	0.00
11,200.0	90.00	180.31	7,084.7	-3,832.6	909.7	3,936.4	0.00	0.00	0.00
11,300.0	90.00	180.31	7,084.7	-3,932.6	909.1	4,034.4	0.00	0.00	0.00
11,400.0	90.00	180.31	7,084.7	-4,032.6	908.6	4,132.4	0.00	0.00	0.00
11,500.0	90.00	180.31	7,084.7	-4,132.6	908.1	4,230.4	0.00	0.00	0.00
11,600.0	90.00	180.31	7,084.7	-4,232.6	907.5	4,328.3	0.00	0.00	0.00
11,700.0	90.00	180.31	7,084.7	-4,332.6	907.0	4,426.3	0.00	0.00	0.00
11,800.0	90.00	180.31	7,084.7	-4,432.6	906.4	4,524.3	0.00	0.00	0.00
11,900.0	90.00	180.31	7,084.7	-4,532.6	905.9	4,622.3	0.00	0.00	0.00
11,925.4	90.00	180.31	7,084.7	-4,558.0	905.7	4,647.1	0.00	0.00	0.00
BHL 470'FSL & 2333'FWL									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,573.9	7,084.7	7"	7	7-1/2

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
4,900.0	4,900.0	0.0	0.0	KOP - Start Build 3.00
6,808.3	6,636.5	229.5	680.9	Start DLS 13.00 TFO 106.46
11,925.4	7,084.7	-4,558.0	905.7	TD at 11925.4

ENSIGN Directional

Great Western

SEC.31-T7N-R65W
Gustafson Pad Sec.31-T7N-R65W
Gustafson EF 31-372HN

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

Anticollision Report

18 December, 2013

Company:	Great Western	**Local Co-ordinate Reference:**	Well Gustafson EF 31-372HN
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 31-372HN	**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 Plan #1 (12-16-13)

Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0ft	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 10,000.0ft	**Error Surface:**	Elliptical Conic

Warning Levels Evaluated at: 2.00 **Sigma**

Survey Tool Program **Date** 12/17/2013

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.0	11,925.4	Plan #1 (12-16-13) (Wellbore #1)	MWD	MWD - Standard

Summary

Site Name / Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Gustafson Pad Sec.31-T7N-R65W						
Gustafson EF 31-373HC - Wellbore #1 - Plan #1 (12-16-	4,900.0	4,900.0	30.0	8.2	1.378	Level 3, CC, ES, SF
Gustafson EF 31-374HN - Wellbore #1 - Plan #1 (12-16-	4,900.0	4,900.0	59.5	37.7	2.730	CC, ES, SF
Gustafson EF 31-377HN - Wellbore #1 - Plan #1 (12-16-	4,900.0	4,900.0	89.5	67.7	4.107	CC, ES, SF
Gustafson EF 31-378HC - Wellbore #1 - Plan #1 (12-16-	4,900.0	4,900.0	119.8	98.0	5.496	CC, ES, SF

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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-87.91	1.1	-30.0	30.0				
100.0	100.0	100.0	100.0	0.1	0.1	-87.91	1.1	-30.0	30.0	29.8	0.22	133.644	
200.0	200.0	200.0	200.0	0.3	0.3	-87.91	1.1	-30.0	30.0	29.4	0.67	44.548	
300.0	300.0	300.0	300.0	0.6	0.6	-87.91	1.1	-30.0	30.0	28.9	1.12	26.729	
400.0	400.0	400.0	400.0	0.8	0.8	-87.91	1.1	-30.0	30.0	28.5	1.57	19.092	
500.0	500.0	500.0	500.0	1.0	1.0	-87.91	1.1	-30.0	30.0	28.0	2.02	14.849	
600.0	600.0	600.0	600.0	1.2	1.2	-87.91	1.1	-30.0	30.0	27.6	2.47	12.149	
700.0	700.0	700.0	700.0	1.5	1.5	-87.91	1.1	-30.0	30.0	27.1	2.92	10.280	
800.0	800.0	800.0	800.0	1.7	1.7	-87.91	1.1	-30.0	30.0	26.7	3.37	8.910	
900.0	900.0	900.0	900.0	1.9	1.9	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	1.1	-30.0	30.0	20.4	9.66	3.108	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Gustafson EF 31-372HN
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 31-372HN	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	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	-87.91	1.1	-30.0	30.0	8.2	21.80	1.378	Level 3, CC, ES, SF
5,000.0	5,000.0	5,000.0	5,000.0	11.1	11.1	-160.90	1.1	-30.0	32.5	10.3	22.22	1.463	Level 3
5,100.0	5,099.6	5,099.6	5,099.6	11.3	11.3	-164.51	1.1	-30.0	40.0	17.4	22.57	1.772	
5,200.0	5,198.8	5,198.8	5,198.8	11.5	11.6	-168.23	1.1	-30.0	52.7	29.8	22.87	2.304	
5,300.0	5,297.1	5,299.3	5,299.3	11.8	11.8	-170.73	2.0	-28.5	69.1	45.9	23.11	2.988	
5,400.0	5,394.3	5,400.2	5,400.1	12.0	12.0	-171.96	4.6	-24.0	87.3	64.0	23.29	3.749	
5,500.0	5,490.2	5,501.4	5,500.9	12.3	12.2	-172.50	9.0	-16.3	107.4	84.0	23.42	4.588	
5,600.0	5,584.4	5,603.0	5,601.7	12.6	12.5	-172.64	15.2	-5.5	129.4	105.9	23.50	5.504	
5,700.0	5,676.8	5,704.9	5,702.3	13.0	12.7	-172.54	23.2	8.5	153.1	129.5	23.54	6.501	
5,800.0	5,767.1	5,807.2	5,802.7	13.4	12.9	-172.29	33.0	25.6	178.5	155.0	23.54	7.582	
5,900.0	5,854.9	5,910.0	5,902.7	14.0	13.2	-171.95	44.7	45.9	205.7	182.2	23.51	8.748	
6,000.0	5,941.0	6,013.7	6,002.8	14.6	13.5	-171.58	58.2	69.5	233.0	209.1	23.87	9.759	
6,100.0	6,027.1	6,119.3	6,103.6	15.3	13.8	-171.03	73.9	96.8	257.1	232.7	24.37	10.548	
6,200.0	6,113.1	6,226.5	6,204.6	16.0	14.2	-170.29	91.6	127.8	277.8	252.9	24.91	11.154	
6,300.0	6,199.2	6,335.0	6,305.6	16.7	14.6	-169.37	111.5	162.5	295.1	269.7	25.48	11.582	
6,400.0	6,285.2	6,444.7	6,405.9	17.5	15.1	-168.26	133.6	200.9	309.0	282.9	26.11	11.835	
6,500.0	6,371.3	6,555.2	6,505.2	18.4	15.7	-166.96	157.7	242.8	319.5	292.7	26.80	11.921	
6,600.0	6,457.3	6,666.1	6,602.9	19.2	16.3	-165.43	183.7	288.3	326.5	299.0	27.57	11.843	
6,700.0	6,543.4	6,771.0	6,693.7	20.1	17.0	-163.79	209.9	334.0	330.8	302.4	28.42	11.641	
6,800.0	6,629.4	6,870.7	6,779.8	21.0	17.7	-162.32	234.6	377.7	334.9	305.6	29.30	11.429	
6,900.0	6,716.3	6,972.1	6,869.6	21.9	18.3	176.90	244.2	423.3	339.1	309.3	29.83	11.366	
7,000.0	6,802.3	7,074.0	6,959.5	22.6	18.8	155.63	230.4	468.8	343.2	313.1	30.13	11.394	
7,100.0	6,883.0	7,176.5	7,044.7	23.2	19.3	140.43	193.7	511.8	347.1	316.9	30.26	11.472	
7,200.0	6,954.5	7,279.3	7,120.3	23.7	19.6	130.77	135.7	549.8	350.5	320.1	30.37	11.540	
7,300.0	7,012.8	7,382.3	7,182.1	24.1	19.9	124.77	59.5	580.7	353.3	322.6	30.64	11.529	
7,400.0	7,055.2	7,485.4	7,226.5	24.4	20.2	121.15	-30.6	602.8	355.2	324.0	31.18	11.391	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Gustafson EF 31-372HN
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 31-372HN	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
7,500.0	7,079.3	7,588.4	7,251.0	24.7	20.5	119.21	-129.6	614.7	356.3	324.2	32.05	11.115	
7,600.0	7,084.7	7,690.2	7,255.7	24.9	20.8	118.67	-231.2	616.6	356.4	323.3	33.13	10.757	
7,700.0	7,084.7	7,790.2	7,255.7	25.3	21.3	118.68	-331.2	616.1	356.4	321.9	34.44	10.347	
7,800.0	7,084.7	7,890.2	7,255.7	25.7	21.9	118.68	-431.2	615.7	356.3	320.3	36.03	9.888	
7,900.0	7,084.7	7,990.2	7,255.7	26.3	22.7	118.69	-531.2	615.2	356.2	318.4	37.87	9.407	
8,000.0	7,084.7	8,090.2	7,255.7	27.0	23.6	118.69	-631.2	614.7	356.2	316.3	39.92	8.922	
8,100.0	7,084.7	8,190.2	7,255.7	27.8	24.6	118.70	-731.2	614.2	356.1	314.0	42.16	8.448	
8,200.0	7,084.7	8,290.2	7,255.7	28.8	25.8	118.70	-831.2	613.8	356.1	311.5	44.54	7.993	
8,300.0	7,084.7	8,390.2	7,255.7	29.8	27.0	118.71	-931.2	613.3	356.0	308.9	47.06	7.564	
8,400.0	7,084.7	8,490.2	7,255.7	30.9	28.4	118.71	-1,031.2	612.8	355.9	306.2	49.69	7.163	
8,500.0	7,084.7	8,590.2	7,255.7	32.2	29.8	118.72	-1,131.2	612.3	355.9	303.5	52.42	6.789	
8,600.0	7,084.7	8,690.2	7,255.7	33.5	31.2	118.72	-1,231.2	611.9	355.8	300.6	55.22	6.443	
8,700.0	7,084.7	8,790.2	7,255.7	34.8	32.7	118.73	-1,331.2	611.4	355.8	297.7	58.10	6.124	
8,800.0	7,084.7	8,890.2	7,255.7	36.3	34.3	118.73	-1,431.2	610.9	355.7	294.7	61.03	5.828	
8,900.0	7,084.7	8,990.2	7,255.7	37.7	35.8	118.74	-1,531.2	610.4	355.6	291.6	64.01	5.556	
9,000.0	7,084.7	9,090.2	7,255.7	39.2	37.5	118.75	-1,631.2	609.9	355.6	288.5	67.04	5.304	
9,100.0	7,084.7	9,190.2	7,255.7	40.8	39.1	118.75	-1,731.2	609.5	355.5	285.4	70.10	5.071	
9,200.0	7,084.7	9,290.2	7,255.7	42.4	40.8	118.76	-1,831.2	609.0	355.4	282.2	73.20	4.856	
9,300.0	7,084.7	9,390.2	7,255.7	44.0	42.5	118.76	-1,931.2	608.5	355.4	279.1	76.33	4.656	
9,400.0	7,084.7	9,490.2	7,255.7	45.6	44.2	118.77	-2,031.2	608.0	355.3	275.8	79.48	4.471	
9,500.0	7,084.7	9,590.2	7,255.7	47.3	45.9	118.77	-2,131.2	607.6	355.3	272.6	82.65	4.298	
9,600.0	7,084.7	9,690.2	7,255.7	49.0	47.6	118.78	-2,231.2	607.1	355.2	269.4	85.85	4.138	
9,700.0	7,084.7	9,790.2	7,255.7	50.7	49.4	118.78	-2,331.2	606.6	355.1	266.1	89.06	3.988	
9,800.0	7,084.7	9,890.2	7,255.7	52.4	51.2	118.79	-2,431.2	606.1	355.1	262.8	92.29	3.847	
9,900.0	7,084.7	9,990.2	7,255.7	54.1	52.9	118.79	-2,531.2	605.7	355.0	259.5	95.54	3.716	
10,000.0	7,084.7	10,090.2	7,255.7	55.8	54.7	118.80	-2,631.2	605.2	355.0	256.2	98.79	3.593	
10,100.0	7,084.7	10,190.2	7,255.7	57.6	56.5	118.80	-2,731.2	604.7	354.9	252.8	102.06	3.477	
10,200.0	7,084.7	10,290.2	7,255.7	59.4	58.3	118.81	-2,831.2	604.2	354.8	249.5	105.34	3.368	
10,300.0	7,084.7	10,390.2	7,255.7	61.1	60.1	118.82	-2,931.2	603.8	354.8	246.1	108.63	3.266	
10,400.0	7,084.7	10,490.2	7,255.7	62.9	62.0	118.82	-3,031.2	603.3	354.7	242.8	111.93	3.169	
10,500.0	7,084.7	10,590.2	7,255.7	64.7	63.8	118.83	-3,131.2	602.8	354.7	239.4	115.24	3.078	
10,600.0	7,084.7	10,690.2	7,255.7	66.5	65.6	118.83	-3,231.2	602.3	354.6	236.0	118.55	2.991	
10,700.0	7,084.7	10,790.2	7,255.7	68.3	67.4	118.84	-3,331.2	601.8	354.5	232.7	121.87	2.909	
10,800.0	7,084.7	10,890.2	7,255.7	70.1	69.3	118.84	-3,431.2	601.4	354.5	229.3	125.19	2.831	
10,900.0	7,084.7	10,990.2	7,255.7	71.9	71.1	118.85	-3,531.2	600.9	354.4	225.9	128.52	2.758	
11,000.0	7,084.7	11,090.2	7,255.7	73.8	73.0	118.85	-3,631.2	600.4	354.4	222.5	131.86	2.687	
11,100.0	7,084.7	11,190.2	7,255.7	75.6	74.8	118.86	-3,731.2	599.9	354.3	219.1	135.20	2.620	
11,200.0	7,084.7	11,290.2	7,255.7	77.4	76.7	118.86	-3,831.2	599.5	354.2	215.7	138.55	2.557	
11,300.0	7,084.7	11,390.2	7,255.7	79.3	78.5	118.87	-3,931.1	599.0	354.2	212.3	141.90	2.496	
11,400.0	7,084.7	11,490.2	7,255.7	81.1	80.4	118.87	-4,031.1	598.5	354.1	208.9	145.25	2.438	
11,500.0	7,084.7	11,590.2	7,255.7	82.9	82.3	118.88	-4,131.1	598.0	354.1	205.4	148.61	2.382	
11,600.0	7,084.7	11,690.2	7,255.7	84.8	84.1	118.89	-4,231.1	597.6	354.0	202.0	151.97	2.329	
11,700.0	7,084.7	11,790.2	7,255.7	86.6	86.0	118.89	-4,331.1	597.1	353.9	198.6	155.33	2.279	
11,800.0	7,084.7	11,890.2	7,255.7	88.5	87.9	118.90	-4,431.1	596.6	353.9	195.2	158.70	2.230	
11,900.0	7,084.7	11,990.2	7,255.7	90.4	89.8	118.90	-4,531.1	596.1	353.8	191.7	162.06	2.183	
11,919.0	7,084.7	12,009.1	7,255.7	90.7	90.1	118.90	-4,550.0	596.0	353.8	191.1	162.70	2.175	
11,925.4	7,084.7	12,009.1	7,255.7	90.8	90.1	118.90	-4,550.0	596.0	353.9	191.0	162.81	2.173	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Gustafson EF 31-372HN
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 31-372HN	**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 31-374HN - Wellbore #1 - Plan #1 (12-16-13)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-87.90	2.2	-59.5	59.5				
100.0	100.0	100.0	100.0	0.1	0.1	-87.90	2.2	-59.5	59.5	59.3	0.22	264.816	
200.0	200.0	200.0	200.0	0.3	0.3	-87.90	2.2	-59.5	59.5	58.8	0.67	88.272	
300.0	300.0	300.0	300.0	0.6	0.6	-87.90	2.2	-59.5	59.5	58.4	1.12	52.963	
400.0	400.0	400.0	400.0	0.8	0.8	-87.90	2.2	-59.5	59.5	57.9	1.57	37.831	
500.0	500.0	500.0	500.0	1.0	1.0	-87.90	2.2	-59.5	59.5	57.5	2.02	29.424	
600.0	600.0	600.0	600.0	1.2	1.2	-87.90	2.2	-59.5	59.5	57.0	2.47	24.074	
700.0	700.0	700.0	700.0	1.5	1.5	-87.90	2.2	-59.5	59.5	56.6	2.92	20.370	
800.0	800.0	800.0	800.0	1.7	1.7	-87.90	2.2	-59.5	59.5	56.2	3.37	17.654	
900.0	900.0	900.0	900.0	1.9	1.9	-87.90	2.2	-59.5	59.5	55.7	3.82	15.577	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-87.90	2.2	-59.5	59.5	55.3	4.27	13.938	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-87.90	2.2	-59.5	59.5	54.8	4.72	12.610	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-87.90	2.2	-59.5	59.5	54.4	5.17	11.514	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-87.90	2.2	-59.5	59.5	53.9	5.62	10.593	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-87.90	2.2	-59.5	59.5	53.5	6.07	9.808	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-87.90	2.2	-59.5	59.5	53.0	6.52	9.132	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	-87.90	2.2	-59.5	59.5	52.6	6.97	8.542	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	-87.90	2.2	-59.5	59.5	52.1	7.42	8.025	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-87.90	2.2	-59.5	59.5	51.7	7.87	7.566	
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	-87.90	2.2	-59.5	59.5	51.2	8.32	7.157	
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	-87.90	2.2	-59.5	59.5	50.8	8.77	6.790	
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	-87.90	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	-87.90	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	-87.90	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	-87.90	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	-87.90	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	-87.90	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	-87.90	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	-87.90	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	-87.90	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	-87.90	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	-87.90	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	-87.90	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	-87.90	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	-87.90	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	-87.90	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	-87.90	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	-87.90	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	-87.90	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	-87.90	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	-87.90	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	-87.90	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	-87.90	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	-87.90	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	-87.90	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	-87.90	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	-87.90	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	-87.90	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	-87.90	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	-87.90	2.2	-59.5	59.5	37.7	21.80	2.730	CC, ES, SF
5,000.0	5,000.0	5,000.0	5,000.0	11.1	11.1	-160.10	2.2	-59.5	62.0	39.8	22.22	2.789	
5,100.0	5,099.6	5,099.6	5,099.6	11.3	11.3	-162.24	2.2	-59.5	69.4	46.8	22.58	3.074	

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

Company:	Great Western	**Local Co-ordinate Reference:**	Well Gustafson EF 31-372HN
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 31-372HN	**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 31-374HN - Wellbore #1 - Plan #1 (12-16-13)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.0	5,198.8	5,198.8	5,198.8	11.5	11.6	-164.92	2.2	-59.5	81.9	59.1	22.88	3.581	
5,300.0	5,297.1	5,297.1	5,297.1	11.8	11.8	-167.53	2.2	-59.5	99.7	76.5	23.13	4.309	
5,400.0	5,394.3	5,394.3	5,394.3	12.0	12.0	-169.76	2.2	-59.5	122.6	99.3	23.31	5.258	
5,500.0	5,490.2	5,490.2	5,490.2	12.3	12.2	-171.55	2.2	-59.5	150.6	127.2	23.44	6.426	
5,600.0	5,584.4	5,589.0	5,589.0	12.6	12.4	-172.79	3.0	-58.9	183.0	159.5	23.52	7.780	
5,700.0	5,676.8	5,691.2	5,691.0	13.0	12.7	-172.92	7.9	-55.2	216.8	193.2	23.56	9.203	
5,800.0	5,767.1	5,794.5	5,793.6	13.4	12.9	-172.27	17.2	-48.1	251.7	228.1	23.56	10.682	
5,900.0	5,854.9	5,898.7	5,896.4	14.0	13.1	-171.10	31.1	-37.6	287.6	264.0	23.54	12.218	
6,000.0	5,941.0	6,004.5	5,999.5	14.6	13.4	-169.67	49.7	-23.4	323.1	299.2	23.93	13.504	
6,100.0	6,027.1	6,112.6	6,103.5	15.3	13.7	-167.85	73.4	-5.4	355.1	330.6	24.48	14.506	
6,200.0	6,113.1	6,222.7	6,207.3	16.0	14.0	-165.64	102.3	16.5	383.5	358.4	25.11	15.276	
6,300.0	6,199.2	6,333.9	6,310.0	16.7	14.4	-163.08	136.3	42.3	408.6	382.8	25.84	15.813	
6,400.0	6,285.2	6,445.5	6,410.4	17.5	14.8	-160.16	175.1	71.8	430.7	404.0	26.72	16.120	
6,500.0	6,371.3	6,553.2	6,504.5	18.4	15.3	-157.04	216.8	103.5	450.4	422.6	27.75	16.228	
6,600.0	6,457.3	6,662.4	6,603.3	19.2	15.7	-155.72	246.9	138.1	468.6	439.9	28.64	16.357	
6,700.0	6,543.4	6,771.0	6,705.5	20.1	16.1	-157.68	250.5	173.7	484.5	455.4	29.06	16.672	
6,800.0	6,629.4	6,867.3	6,794.5	21.0	16.3	-161.80	231.4	204.7	500.3	471.2	29.07	17.212	
6,900.0	6,716.3	6,950.0	6,866.3	21.9	16.5	170.84	199.1	229.6	519.5	490.5	28.92	17.959	
7,000.0	6,802.3	7,029.1	6,928.4	22.6	16.5	143.38	155.4	251.0	541.4	512.0	29.44	18.389	
7,100.0	6,883.0	7,103.6	6,979.4	23.2	16.6	122.88	104.1	268.6	563.9	533.4	30.42	18.534	
7,200.0	6,954.5	7,175.0	7,020.0	23.7	16.7	108.93	47.1	282.5	584.7	553.3	31.43	18.602	
7,300.0	7,012.8	7,246.1	7,051.2	24.1	16.8	99.67	-15.8	293.1	602.4	570.2	32.19	18.711	
7,400.0	7,055.2	7,315.3	7,072.1	24.4	16.9	93.87	-81.4	300.1	615.6	582.9	32.66	18.847	
7,500.0	7,079.3	7,383.8	7,083.0	24.7	17.2	90.76	-148.9	303.6	623.4	590.5	32.98	18.904	
7,600.0	7,084.7	7,465.2	7,084.7	24.9	17.6	90.00	-230.2	303.9	625.4	591.9	33.49	18.675	
7,700.0	7,084.7	7,565.2	7,084.7	25.3	18.2	90.00	-330.2	303.5	625.3	590.5	34.79	17.973	
7,800.0	7,084.7	7,665.2	7,084.7	25.7	19.0	90.00	-430.2	303.1	625.1	588.7	36.47	17.143	
7,900.0	7,084.7	7,765.2	7,084.7	26.3	20.0	90.00	-530.2	302.7	625.0	586.5	38.46	16.252	
8,000.0	7,084.7	7,865.2	7,084.7	27.0	21.1	90.00	-630.2	302.3	624.8	584.1	40.71	15.348	
8,100.0	7,084.7	7,965.2	7,084.7	27.8	22.3	90.00	-730.2	301.9	624.7	581.5	43.19	14.463	
8,200.0	7,084.7	8,065.2	7,084.7	28.8	23.6	90.00	-830.2	301.5	624.6	578.7	45.86	13.618	
8,300.0	7,084.7	8,165.2	7,084.7	29.8	25.0	90.00	-930.2	301.1	624.4	575.7	48.69	12.824	
8,400.0	7,084.7	8,265.2	7,084.7	30.9	26.5	90.00	-1,030.2	300.7	624.3	572.6	51.65	12.087	
8,500.0	7,084.7	8,365.2	7,084.7	32.2	28.0	90.00	-1,130.2	300.3	624.1	569.4	54.72	11.407	
8,600.0	7,084.7	8,465.2	7,084.7	33.5	29.5	90.00	-1,230.2	299.9	624.0	566.1	57.88	10.781	
8,700.0	7,084.7	8,565.2	7,084.7	34.8	31.1	90.00	-1,330.2	299.5	623.8	562.7	61.12	10.207	
8,800.0	7,084.7	8,665.2	7,084.7	36.3	32.8	90.00	-1,430.2	299.1	623.7	559.3	64.42	9.681	
8,900.0	7,084.7	8,765.2	7,084.7	37.7	34.4	90.00	-1,530.2	298.7	623.5	555.8	67.79	9.199	
9,000.0	7,084.7	8,865.2	7,084.7	39.2	36.1	90.00	-1,630.2	298.3	623.4	552.2	71.20	8.756	
9,100.0	7,084.7	8,965.2	7,084.7	40.8	37.8	90.00	-1,730.2	297.9	623.3	548.6	74.65	8.349	
9,200.0	7,084.7	9,065.2	7,084.7	42.4	39.6	90.00	-1,830.2	297.5	623.1	545.0	78.14	7.974	
9,300.0	7,084.7	9,165.2	7,084.7	44.0	41.3	90.00	-1,930.2	297.1	623.0	541.3	81.66	7.628	
9,400.0	7,084.7	9,265.2	7,084.7	45.6	43.1	90.00	-2,030.2	296.7	622.8	537.6	85.21	7.309	
9,500.0	7,084.7	9,365.2	7,084.7	47.3	44.8	90.00	-2,130.2	296.3	622.7	533.9	88.79	7.013	
9,600.0	7,084.7	9,465.2	7,084.7	49.0	46.6	90.00	-2,230.2	295.9	622.5	530.1	92.38	6.739	
9,700.0	7,084.7	9,565.2	7,084.7	50.7	48.4	90.00	-2,330.2	295.5	622.4	526.4	96.00	6.483	
9,800.0	7,084.7	9,665.2	7,084.7	52.4	50.2	90.00	-2,430.2	295.1	622.2	522.6	99.63	6.245	
9,900.0	7,084.7	9,765.2	7,084.7	54.1	52.1	90.00	-2,530.2	294.7	622.1	518.8	103.28	6.023	
10,000.0	7,084.7	9,865.2	7,084.7	55.8	53.9	90.00	-2,630.2	294.3	622.0	515.0	106.94	5.816	
10,100.0	7,084.7	9,965.2	7,084.7	57.6	55.7	90.00	-2,730.2	293.9	621.8	511.2	110.61	5.621	
10,200.0	7,084.7	10,065.2	7,084.7	59.4	57.5	90.00	-2,830.2	293.5	621.7	507.4	114.30	5.439	
10,300.0	7,084.7	10,165.2	7,084.7	61.1	59.4	90.00	-2,930.1	293.1	621.5	503.5	117.99	5.267	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Gustafson EF 31-372HN
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 31-372HN	**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 31-374HN - Wellbore #1 - Plan #1 (12-16-13)

Offset Site Error: 0.0 ft

Survey Program: 0-MWD

Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,400.0	7,084.7	10,265.2	7,084.7	62.9	61.2	90.00	-3,030.1	292.7	621.4	499.7	121.70	5.106	
10,500.0	7,084.7	10,365.2	7,084.7	64.7	63.1	90.00	-3,130.1	292.3	621.2	495.8	125.41	4.954	
10,600.0	7,084.7	10,465.2	7,084.7	66.5	64.9	90.00	-3,230.1	291.9	621.1	492.0	129.13	4.810	
10,700.0	7,084.7	10,565.2	7,084.7	68.3	66.8	90.00	-3,330.1	291.5	620.9	488.1	132.86	4.674	
10,800.0	7,084.7	10,665.2	7,084.7	70.1	68.6	90.00	-3,430.1	291.1	620.8	484.2	136.59	4.545	
10,900.0	7,084.7	10,765.2	7,084.7	71.9	70.5	90.00	-3,530.1	290.7	620.6	480.3	140.33	4.423	
11,000.0	7,084.7	10,865.2	7,084.7	73.8	72.4	90.00	-3,630.1	290.3	620.5	476.4	144.08	4.307	
11,100.0	7,084.7	10,965.2	7,084.7	75.6	74.3	90.00	-3,730.1	289.9	620.4	472.5	147.83	4.196	
11,200.0	7,084.7	11,065.2	7,084.7	77.4	76.1	90.00	-3,830.1	289.5	620.2	468.6	151.58	4.092	
11,300.0	7,084.7	11,165.2	7,084.7	79.3	78.0	90.00	-3,930.1	289.1	620.1	464.7	155.34	3.992	
11,400.0	7,084.7	11,265.2	7,084.7	81.1	79.9	90.00	-4,030.1	288.7	619.9	460.8	159.11	3.896	
11,500.0	7,084.7	11,365.2	7,084.7	82.9	81.8	90.00	-4,130.1	288.3	619.8	456.9	162.87	3.805	
11,600.0	7,084.7	11,465.2	7,084.7	84.8	83.6	90.00	-4,230.1	287.9	619.6	453.0	166.64	3.718	
11,700.0	7,084.7	11,565.2	7,084.7	86.6	85.5	90.00	-4,330.1	287.5	619.5	449.1	170.42	3.635	
11,800.0	7,084.7	11,665.2	7,084.7	88.5	87.4	90.00	-4,430.1	287.1	619.3	445.2	174.20	3.555	
11,900.0	7,084.7	11,765.2	7,084.7	90.4	89.1	90.00	-4,530.1	286.7	619.2	441.5	177.74	3.484	
11,911.6	7,084.7	11,775.9	7,084.7	90.6	89.2	90.00	-4,540.9	286.6	619.2	441.1	178.12	3.476	
11,925.4	7,084.7	11,775.9	7,084.7	90.8	89.2	90.00	-4,540.9	286.6	619.3	441.0	178.38	3.472	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Gustafson EF 31-372HN
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 31-372HN	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-88.14	2.9	-89.5	89.5				
100.0	100.0	100.0	100.0	0.1	0.1	-88.14	2.9	-89.5	89.5	89.3	0.22	398.402	
200.0	200.0	200.0	200.0	0.3	0.3	-88.14	2.9	-89.5	89.5	88.9	0.67	132.801	
300.0	300.0	300.0	300.0	0.6	0.6	-88.14	2.9	-89.5	89.5	88.4	1.12	79.680	
400.0	400.0	400.0	400.0	0.8	0.8	-88.14	2.9	-89.5	89.5	88.0	1.57	56.915	
500.0	500.0	500.0	500.0	1.0	1.0	-88.14	2.9	-89.5	89.5	87.5	2.02	44.267	
600.0	600.0	600.0	600.0	1.2	1.2	-88.14	2.9	-89.5	89.5	87.1	2.47	36.218	
700.0	700.0	700.0	700.0	1.5	1.5	-88.14	2.9	-89.5	89.5	86.6	2.92	30.646	
800.0	800.0	800.0	800.0	1.7	1.7	-88.14	2.9	-89.5	89.5	86.2	3.37	26.560	
900.0	900.0	900.0	900.0	1.9	1.9	-88.14	2.9	-89.5	89.5	85.7	3.82	23.435	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-88.14	2.9	-89.5	89.5	85.3	4.27	20.969	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-88.14	2.9	-89.5	89.5	84.8	4.72	18.972	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-88.14	2.9	-89.5	89.5	84.4	5.17	17.322	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-88.14	2.9	-89.5	89.5	83.9	5.62	15.936	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-88.14	2.9	-89.5	89.5	83.5	6.07	14.756	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-88.14	2.9	-89.5	89.5	83.0	6.52	13.738	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	-88.14	2.9	-89.5	89.5	82.6	6.97	12.852	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	-88.14	2.9	-89.5	89.5	82.1	7.42	12.073	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-88.14	2.9	-89.5	89.5	81.7	7.87	11.383	
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	-88.14	2.9	-89.5	89.5	81.2	8.32	10.768	
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	-88.14	2.9	-89.5	89.5	80.8	8.77	10.215	
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	-88.14	2.9	-89.5	89.5	80.3	9.22	9.717	
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	-88.14	2.9	-89.5	89.5	79.9	9.66	9.265	
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	-88.14	2.9	-89.5	89.5	79.4	10.11	8.853	
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	-88.14	2.9	-89.5	89.5	79.0	10.56	8.477	
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	-88.14	2.9	-89.5	89.5	78.5	11.01	8.131	
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	-88.14	2.9	-89.5	89.5	78.1	11.46	7.812	
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	-88.14	2.9	-89.5	89.5	77.6	11.91	7.517	
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	-88.14	2.9	-89.5	89.5	77.2	12.36	7.244	
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	-88.14	2.9	-89.5	89.5	76.7	12.81	6.990	
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	-88.14	2.9	-89.5	89.5	76.3	13.26	6.753	
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	-88.14	2.9	-89.5	89.5	75.8	13.71	6.531	
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	-88.14	2.9	-89.5	89.5	75.4	14.16	6.324	
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	-88.14	2.9	-89.5	89.5	74.9	14.61	6.129	
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	-88.14	2.9	-89.5	89.5	74.5	15.06	5.946	
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	-88.14	2.9	-89.5	89.5	74.0	15.51	5.774	
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	-88.14	2.9	-89.5	89.5	73.6	15.96	5.611	
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	-88.14	2.9	-89.5	89.5	73.1	16.41	5.458	
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	-88.14	2.9	-89.5	89.5	72.7	16.86	5.312	
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	-88.14	2.9	-89.5	89.5	72.2	17.31	5.174	
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	-88.14	2.9	-89.5	89.5	71.8	17.76	5.043	
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	-88.14	2.9	-89.5	89.5	71.3	18.21	4.919	
4,200.0	4,200.0	4,200.0	4,200.0	9.3	9.3	-88.14	2.9	-89.5	89.5	70.9	18.66	4.800	
4,300.0	4,300.0	4,300.0	4,300.0	9.6	9.6	-88.14	2.9	-89.5	89.5	70.4	19.11	4.687	
4,400.0	4,400.0	4,400.0	4,400.0	9.8	9.8	-88.14	2.9	-89.5	89.5	70.0	19.55	4.579	
4,500.0	4,500.0	4,500.0	4,500.0	10.0	10.0	-88.14	2.9	-89.5	89.5	69.5	20.00	4.476	
4,600.0	4,600.0	4,600.0	4,600.0	10.2	10.2	-88.14	2.9	-89.5	89.5	69.1	20.45	4.378	
4,700.0	4,700.0	4,700.0	4,700.0	10.5	10.5	-88.14	2.9	-89.5	89.5	68.6	20.90	4.284	
4,800.0	4,800.0	4,800.0	4,800.0	10.7	10.7	-88.14	2.9	-89.5	89.5	68.2	21.35	4.194	
4,900.0	4,900.0	4,900.0	4,900.0	10.9	10.9	-88.14	2.9	-89.5	89.5	67.7	21.80	4.107	CC, ES, SF
5,000.0	5,000.0	5,000.0	5,000.0	11.1	11.1	-160.06	2.9	-89.5	92.0	69.8	22.22	4.141	
5,100.0	5,099.6	5,099.6	5,099.6	11.3	11.3	-161.53	2.9	-89.5	99.4	76.8	22.58	4.403	

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

Company:	Great Western	**Local Co-ordinate Reference:**	Well Gustafson EF 31-372HN
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 31-372HN	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.0	5,198.8	5,198.8	5,198.8	11.5	11.6	-163.54	2.9	-89.5	111.9	89.0	22.88	4.889	
5,300.0	5,297.1	5,297.1	5,297.1	11.8	11.8	-165.69	2.9	-89.5	129.5	106.3	23.13	5.597	
5,400.0	5,394.3	5,394.3	5,394.3	12.0	12.0	-167.71	2.9	-89.5	152.2	128.9	23.32	6.527	
5,500.0	5,490.2	5,490.2	5,490.2	12.3	12.2	-169.48	2.9	-89.5	180.1	156.7	23.45	7.680	
5,600.0	5,584.4	5,584.4	5,584.4	12.6	12.4	-170.95	2.9	-89.5	213.1	189.5	23.53	9.055	
5,700.0	5,676.8	5,676.8	5,676.8	13.0	12.6	-172.16	2.9	-89.5	251.0	227.4	23.55	10.658	
5,800.0	5,767.1	5,766.1	5,766.1	13.4	12.8	-173.08	3.1	-89.6	293.8	270.2	23.51	12.492	
5,900.0	5,854.9	5,849.7	5,849.6	14.0	13.0	-172.95	7.3	-91.3	342.0	318.6	23.44	14.595	
6,000.0	5,941.0	5,930.1	5,929.3	14.6	13.2	-172.05	16.7	-95.2	394.5	370.7	23.75	16.611	
6,100.0	6,027.1	6,008.2	6,005.9	15.3	13.4	-170.61	30.7	-101.0	448.3	424.1	24.19	18.528	
6,200.0	6,113.1	6,083.4	6,078.5	16.0	13.6	-168.82	48.8	-108.4	503.6	478.9	24.67	20.408	
6,300.0	6,199.2	6,155.4	6,146.7	16.7	13.7	-166.86	70.1	-117.3	560.5	535.3	25.20	22.247	
6,400.0	6,285.2	6,223.8	6,210.0	17.5	13.9	-164.84	94.0	-127.1	619.4	593.6	25.76	24.043	
6,500.0	6,371.3	6,288.4	6,268.3	18.4	14.1	-162.84	119.8	-137.8	680.3	654.0	26.38	25.793	
6,600.0	6,457.3	6,352.5	6,324.5	19.2	14.4	-160.79	148.3	-149.6	743.4	716.4	27.06	27.476	
6,700.0	6,543.4	6,420.8	6,383.4	20.1	14.6	-158.74	180.2	-162.8	808.0	780.2	27.83	29.038	
6,800.0	6,629.4	6,493.4	6,446.0	21.0	15.0	-156.85	214.1	-176.8	873.3	844.6	28.65	30.475	
6,900.0	6,716.3	6,563.0	6,507.8	21.9	15.2	173.80	242.9	-190.6	939.6	911.2	28.49	32.982	
7,000.0	6,802.3	6,633.3	6,573.8	22.6	15.5	143.63	261.7	-205.4	1,006.3	977.0	29.25	34.402	
7,100.0	6,883.0	6,708.7	6,646.8	23.2	15.7	120.99	269.5	-221.9	1,070.6	1,040.0	30.63	34.957	
7,200.0	6,954.5	6,796.1	6,731.7	23.7	15.9	105.92	262.5	-241.0	1,130.2	1,098.4	31.79	35.555	
7,300.0	7,012.8	6,908.1	6,835.6	24.1	15.9	96.82	228.9	-264.5	1,182.3	1,150.0	32.30	36.600	
7,400.0	7,055.2	7,067.4	6,961.9	24.4	15.9	92.39	137.5	-293.3	1,223.3	1,191.0	32.28	37.892	
7,500.0	7,079.3	7,297.7	7,071.1	24.7	16.0	90.75	-60.7	-318.5	1,247.5	1,215.0	32.48	38.404	
7,600.0	7,084.7	7,467.1	7,084.7	24.9	16.7	90.00	-228.8	-322.0	1,251.4	1,218.0	33.43	37.428	
7,700.0	7,084.7	7,567.1	7,084.7	25.3	17.4	90.00	-328.8	-322.4	1,251.1	1,216.4	34.73	36.023	
7,800.0	7,084.7	7,667.1	7,084.7	25.7	18.3	90.00	-428.8	-322.7	1,250.9	1,214.5	36.41	34.353	
7,900.0	7,084.7	7,767.1	7,084.7	26.3	19.3	90.00	-528.8	-323.0	1,250.7	1,212.3	38.41	32.564	
8,000.0	7,084.7	7,867.1	7,084.7	27.0	20.4	90.00	-628.8	-323.3	1,250.4	1,209.8	40.67	30.748	
8,100.0	7,084.7	7,967.1	7,084.7	27.8	21.7	90.00	-728.8	-323.6	1,250.2	1,207.0	43.15	28.972	
8,200.0	7,084.7	8,067.1	7,084.7	28.8	23.0	90.00	-828.8	-323.9	1,250.0	1,204.1	45.82	27.277	
8,300.0	7,084.7	8,167.1	7,084.7	29.8	24.4	90.00	-928.8	-324.2	1,249.7	1,201.1	48.65	25.685	
8,400.0	7,084.7	8,267.1	7,084.7	30.9	25.9	90.00	-1,028.8	-324.5	1,249.5	1,197.9	51.62	24.207	
8,500.0	7,084.7	8,367.1	7,084.7	32.2	27.5	90.00	-1,128.8	-324.8	1,249.2	1,194.6	54.69	22.843	
8,600.0	7,084.7	8,467.1	7,084.7	33.5	29.1	90.00	-1,228.8	-325.1	1,249.0	1,191.2	57.85	21.590	
8,700.0	7,084.7	8,567.1	7,084.7	34.8	30.7	90.00	-1,328.8	-325.4	1,248.8	1,187.7	61.09	20.440	
8,800.0	7,084.7	8,667.1	7,084.7	36.3	32.3	90.00	-1,428.8	-325.7	1,248.5	1,184.1	64.40	19.386	
8,900.0	7,084.7	8,767.1	7,084.7	37.7	34.0	90.00	-1,528.8	-326.0	1,248.3	1,180.5	67.77	18.420	
9,000.0	7,084.7	8,867.1	7,084.7	39.2	35.7	90.00	-1,628.8	-326.4	1,248.1	1,176.9	71.18	17.533	
9,100.0	7,084.7	8,967.1	7,084.7	40.8	37.5	90.00	-1,728.8	-326.7	1,247.8	1,173.2	74.64	16.718	
9,200.0	7,084.7	9,067.1	7,084.7	42.4	39.2	90.00	-1,828.8	-327.0	1,247.6	1,169.4	78.13	15.968	
9,300.0	7,084.7	9,167.1	7,084.7	44.0	41.0	90.00	-1,928.8	-327.3	1,247.3	1,165.7	81.65	15.276	
9,400.0	7,084.7	9,267.1	7,084.7	45.6	42.7	90.00	-2,028.8	-327.6	1,247.1	1,161.9	85.20	14.637	
9,500.0	7,084.7	9,367.1	7,084.7	47.3	44.5	90.00	-2,128.8	-327.9	1,246.9	1,158.1	88.78	14.045	
9,600.0	7,084.7	9,467.1	7,084.7	49.0	46.3	90.00	-2,228.8	-328.2	1,246.6	1,154.2	92.38	13.495	
9,700.0	7,084.7	9,567.1	7,084.7	50.7	48.1	90.00	-2,328.8	-328.5	1,246.4	1,150.4	95.99	12.984	
9,800.0	7,084.7	9,667.1	7,084.7	52.4	50.0	90.00	-2,428.8	-328.8	1,246.1	1,146.5	99.63	12.508	
9,900.0	7,084.7	9,767.1	7,084.7	54.1	51.8	90.00	-2,528.8	-329.1	1,245.9	1,142.6	103.28	12.064	
10,000.0	7,084.7	9,867.1	7,084.7	55.8	53.6	90.00	-2,628.8	-329.4	1,245.7	1,138.7	106.94	11.649	
10,100.0	7,084.7	9,967.1	7,084.7	57.6	55.5	90.00	-2,728.8	-329.7	1,245.4	1,134.8	110.61	11.259	
10,200.0	7,084.7	10,067.1	7,084.7	59.4	57.3	90.00	-2,828.8	-330.0	1,245.2	1,130.9	114.30	10.894	
10,300.0	7,084.7	10,167.1	7,084.7	61.1	59.1	90.00	-2,928.8	-330.3	1,245.0	1,127.0	117.99	10.551	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Gustafson EF 31-372HN
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 31-372HN	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,400.0	7,084.7	10,267.1	7,084.7	62.9	61.0	90.00	-3,028.8	-330.7	1,244.7	1,123.0	121.70	10.228	
10,500.0	7,084.7	10,367.1	7,084.7	64.7	62.9	90.00	-3,128.8	-331.0	1,244.5	1,119.1	125.41	9.923	
10,600.0	7,084.7	10,467.1	7,084.7	66.5	64.7	90.00	-3,228.8	-331.3	1,244.2	1,115.1	129.13	9.635	
10,700.0	7,084.7	10,567.1	7,084.7	68.3	66.6	90.00	-3,328.8	-331.6	1,244.0	1,111.1	132.86	9.363	
10,800.0	7,084.7	10,667.1	7,084.7	70.1	68.4	90.00	-3,428.8	-331.9	1,243.8	1,107.2	136.60	9.105	
10,900.0	7,084.7	10,767.1	7,084.7	71.9	70.3	90.00	-3,528.8	-332.2	1,243.5	1,103.2	140.34	8.861	
11,000.0	7,084.7	10,867.1	7,084.7	73.8	72.2	90.00	-3,628.8	-332.5	1,243.3	1,099.2	144.08	8.629	
11,100.0	7,084.7	10,967.1	7,084.7	75.6	74.1	90.00	-3,728.8	-332.8	1,243.1	1,095.2	147.84	8.408	
11,200.0	7,084.7	11,067.1	7,084.7	77.4	75.9	90.00	-3,828.8	-333.1	1,242.8	1,091.2	151.59	8.198	
11,300.0	7,084.7	11,167.1	7,084.7	79.3	77.8	90.00	-3,928.8	-333.4	1,242.6	1,087.2	155.35	7.998	
11,400.0	7,084.7	11,267.1	7,084.7	81.1	79.7	90.00	-4,028.8	-333.7	1,242.3	1,083.2	159.12	7.808	
11,500.0	7,084.7	11,367.1	7,084.7	82.9	81.6	90.00	-4,128.8	-334.0	1,242.1	1,079.2	162.88	7.626	
11,600.0	7,084.7	11,467.1	7,084.7	84.8	83.5	90.00	-4,228.8	-334.3	1,241.9	1,075.2	166.65	7.452	
11,700.0	7,084.7	11,567.1	7,084.7	86.6	85.4	90.00	-4,328.8	-334.7	1,241.6	1,071.2	170.43	7.285	
11,800.0	7,084.7	11,667.1	7,084.7	88.5	87.3	90.00	-4,428.8	-335.0	1,241.4	1,067.2	174.21	7.126	
11,891.3	7,084.7	11,758.3	7,084.7	90.2	88.8	90.00	-4,520.1	-335.2	1,241.2	1,063.7	177.45	6.995	
11,900.0	7,084.7	11,762.7	7,084.7	90.4	88.8	90.00	-4,524.5	-335.3	1,241.2	1,063.5	177.68	6.985	
11,925.4	7,084.7	11,762.7	7,084.7	90.8	88.8	90.00	-4,524.5	-335.3	1,241.4	1,063.3	178.16	6.968	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Gustafson EF 31-372HN
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 31-372HN	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-88.61	2.9	-119.8	119.8				
100.0	100.0	100.0	100.0	0.1	0.1	-88.61	2.9	-119.8	119.8	119.6	0.22	533.143	
200.0	200.0	200.0	200.0	0.3	0.3	-88.61	2.9	-119.8	119.8	119.2	0.67	177.714	
300.0	300.0	300.0	300.0	0.6	0.6	-88.61	2.9	-119.8	119.8	118.7	1.12	106.629	
400.0	400.0	400.0	400.0	0.8	0.8	-88.61	2.9	-119.8	119.8	118.3	1.57	76.163	
500.0	500.0	500.0	500.0	1.0	1.0	-88.61	2.9	-119.8	119.8	117.8	2.02	59.238	
600.0	600.0	600.0	600.0	1.2	1.2	-88.61	2.9	-119.8	119.8	117.4	2.47	48.468	
700.0	700.0	700.0	700.0	1.5	1.5	-88.61	2.9	-119.8	119.8	116.9	2.92	41.011	
800.0	800.0	800.0	800.0	1.7	1.7	-88.61	2.9	-119.8	119.8	116.5	3.37	35.543	
900.0	900.0	900.0	900.0	1.9	1.9	-88.61	2.9	-119.8	119.8	116.0	3.82	31.361	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-88.61	2.9	-119.8	119.8	115.6	4.27	28.060	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-88.61	2.9	-119.8	119.8	115.1	4.72	25.388	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-88.61	2.9	-119.8	119.8	114.7	5.17	23.180	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-88.61	2.9	-119.8	119.8	114.2	5.62	21.326	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-88.61	2.9	-119.8	119.8	113.8	6.07	19.746	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-88.61	2.9	-119.8	119.8	113.3	6.52	18.384	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	-88.61	2.9	-119.8	119.8	112.9	6.97	17.198	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	-88.61	2.9	-119.8	119.8	112.4	7.42	16.156	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-88.61	2.9	-119.8	119.8	112.0	7.87	15.233	
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	-88.61	2.9	-119.8	119.8	111.5	8.32	14.409	
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	-88.61	2.9	-119.8	119.8	111.1	8.77	13.670	
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	-88.61	2.9	-119.8	119.8	110.6	9.22	13.003	
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	-88.61	2.9	-119.8	119.8	110.2	9.66	12.399	
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	-88.61	2.9	-119.8	119.8	109.7	10.11	11.848	
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	-88.61	2.9	-119.8	119.8	109.3	10.56	11.343	
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	-88.61	2.9	-119.8	119.8	108.8	11.01	10.880	
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	-88.61	2.9	-119.8	119.8	108.4	11.46	10.454	
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	-88.61	2.9	-119.8	119.8	107.9	11.91	10.059	
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	-88.61	2.9	-119.8	119.8	107.5	12.36	9.694	
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	-88.61	2.9	-119.8	119.8	107.0	12.81	9.353	
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	-88.61	2.9	-119.8	119.8	106.6	13.26	9.036	
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	-88.61	2.9	-119.8	119.8	106.1	13.71	8.740	
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	-88.61	2.9	-119.8	119.8	105.7	14.16	8.463	
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	-88.61	2.9	-119.8	119.8	105.2	14.61	8.202	
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	-88.61	2.9	-119.8	119.8	104.8	15.06	7.957	
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	-88.61	2.9	-119.8	119.8	104.3	15.51	7.727	
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	-88.61	2.9	-119.8	119.8	103.9	15.96	7.509	
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	-88.61	2.9	-119.8	119.8	103.4	16.41	7.303	
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	-88.61	2.9	-119.8	119.8	103.0	16.86	7.109	
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	-88.61	2.9	-119.8	119.8	102.5	17.31	6.924	
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	-88.61	2.9	-119.8	119.8	102.1	17.76	6.749	
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	-88.61	2.9	-119.8	119.8	101.6	18.21	6.582	
4,200.0	4,200.0	4,200.0	4,200.0	9.3	9.3	-88.61	2.9	-119.8	119.8	101.2	18.66	6.423	
4,300.0	4,300.0	4,300.0	4,300.0	9.6	9.6	-88.61	2.9	-119.8	119.8	100.7	19.11	6.272	
4,400.0	4,400.0	4,400.0	4,400.0	9.8	9.8	-88.61	2.9	-119.8	119.8	100.3	19.55	6.128	
4,500.0	4,500.0	4,500.0	4,500.0	10.0	10.0	-88.61	2.9	-119.8	119.8	99.8	20.00	5.990	
4,600.0	4,600.0	4,600.0	4,600.0	10.2	10.2	-88.61	2.9	-119.8	119.8	99.4	20.45	5.859	
4,700.0	4,700.0	4,700.0	4,700.0	10.5	10.5	-88.61	2.9	-119.8	119.8	98.9	20.90	5.733	
4,800.0	4,800.0	4,800.0	4,800.0	10.7	10.7	-88.61	2.9	-119.8	119.8	98.5	21.35	5.612	
4,900.0	4,900.0	4,900.0	4,900.0	10.9	10.9	-88.61	2.9	-119.8	119.8	98.0	21.80	5.496	CC, ES, SF
5,000.0	5,000.0	5,000.0	5,000.0	11.1	11.1	-160.37	2.9	-119.8	122.3	100.1	22.22	5.504	
5,100.0	5,099.6	5,099.6	5,099.6	11.3	11.3	-161.47	2.9	-119.8	129.7	107.1	22.58	5.745	

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

Company:	Great Western	**Local Co-ordinate Reference:**	Well Gustafson EF 31-372HN
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 31-372HN	**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 Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.0	5,198.8	5,198.8	5,198.8	11.5	11.6	-163.03	2.9	-119.8	142.2	119.3	22.88	6.212	
5,300.0	5,297.1	5,297.1	5,297.1	11.8	11.8	-164.79	2.9	-119.8	159.7	136.6	23.13	6.903	
5,400.0	5,394.3	5,394.3	5,394.3	12.0	12.0	-166.55	2.9	-119.8	182.3	159.0	23.33	7.817	
5,500.0	5,490.2	5,490.2	5,490.2	12.3	12.2	-168.18	2.9	-119.8	210.1	186.6	23.46	8.956	
5,600.0	5,584.4	5,579.3	5,579.3	12.6	12.4	-169.34	3.5	-120.5	243.6	220.1	23.53	10.354	
5,700.0	5,676.8	5,662.7	5,662.6	13.0	12.6	-169.70	6.2	-124.0	284.6	261.1	23.54	12.092	
5,800.0	5,767.1	5,741.8	5,741.3	13.4	12.8	-169.52	11.0	-129.8	332.8	309.3	23.50	14.161	
5,900.0	5,854.9	5,816.1	5,814.9	14.0	12.9	-168.98	17.2	-137.7	387.6	364.2	23.42	16.550	
6,000.0	5,941.0	5,885.9	5,883.7	14.6	13.1	-168.55	24.8	-147.1	447.5	423.8	23.72	18.867	
6,100.0	6,027.1	5,953.0	5,949.3	15.3	13.3	-168.03	33.5	-157.9	509.4	485.2	24.13	21.109	
6,200.0	6,113.1	6,017.4	6,011.8	16.0	13.4	-167.42	43.2	-170.1	573.1	548.5	24.56	23.336	
6,300.0	6,199.2	6,079.1	6,071.2	16.7	13.6	-166.75	53.7	-183.2	638.6	613.6	25.01	25.540	
6,400.0	6,285.2	6,138.3	6,127.5	17.5	13.8	-166.06	65.0	-197.2	705.9	680.4	25.47	27.719	
6,500.0	6,371.3	6,200.0	6,185.7	18.4	14.0	-165.31	77.8	-213.3	774.8	748.8	25.95	29.851	
6,600.0	6,457.3	6,248.9	6,231.3	19.2	14.1	-164.69	88.8	-227.0	845.2	818.7	26.43	31.973	
6,700.0	6,543.4	6,300.0	6,278.5	20.1	14.3	-164.04	101.1	-242.4	917.1	890.1	26.94	34.044	
6,800.0	6,629.4	6,349.8	6,323.9	21.0	14.5	-163.39	113.9	-258.3	990.4	962.9	27.47	36.060	
6,900.0	6,716.3	6,400.0	6,369.2	21.9	14.7	163.99	127.5	-275.2	1,064.7	1,037.0	27.72	38.405	
7,000.0	6,802.3	6,434.0	6,399.5	22.6	14.9	131.19	137.1	-287.2	1,137.7	1,108.4	29.39	38.709	
7,100.0	6,883.0	6,463.7	6,425.8	23.2	15.0	106.72	145.8	-298.1	1,207.3	1,176.1	31.16	38.746	
7,200.0	6,954.5	6,500.0	6,457.6	23.7	15.2	90.59	156.7	-311.7	1,271.6	1,239.7	31.96	39.786	
7,300.0	7,012.8	6,500.0	6,457.6	24.1	15.2	78.28	156.7	-311.7	1,328.7	1,297.2	31.52	42.153	
7,400.0	7,055.2	6,500.0	6,457.6	24.4	15.2	70.19	156.7	-311.7	1,377.2	1,347.1	30.19	45.623	
7,500.0	7,079.3	6,500.0	6,457.6	24.7	15.2	65.24	156.7	-311.7	1,415.9	1,387.2	28.70	49.334	
7,600.0	7,084.7	6,471.7	6,432.8	24.9	15.0	62.12	148.2	-301.0	1,443.5	1,415.8	27.71	52.092	
7,700.0	7,084.7	6,454.6	6,417.8	25.3	15.0	61.46	143.1	-294.7	1,472.5	1,444.4	28.04	52.506	
7,800.0	7,084.7	6,438.2	6,403.2	25.7	14.9	60.81	138.3	-288.7	1,507.1	1,478.6	28.55	52.793	
7,900.0	7,084.7	6,400.0	6,369.2	26.3	14.7	59.33	127.5	-275.2	1,547.5	1,518.6	28.92	53.503	
8,000.0	7,084.7	6,400.0	6,369.2	27.0	14.7	59.33	127.5	-275.2	1,592.3	1,562.4	29.89	53.270	
8,100.0	7,084.7	8,216.9	7,255.7	27.8	23.5	96.07	-728.9	-681.5	1,617.1	1,573.5	43.64	37.060	
8,200.0	7,084.7	8,316.9	7,255.7	28.8	24.7	96.07	-828.9	-681.7	1,616.8	1,570.6	46.26	34.949	
8,300.0	7,084.7	8,416.9	7,255.7	29.8	26.0	96.07	-928.9	-681.9	1,616.5	1,567.5	49.05	32.959	
8,400.0	7,084.7	8,516.9	7,255.7	30.9	27.4	96.07	-1,028.9	-682.2	1,616.2	1,564.2	51.96	31.102	
8,500.0	7,084.7	8,616.9	7,255.7	32.2	28.8	96.07	-1,128.9	-682.4	1,615.9	1,560.9	54.99	29.384	
8,600.0	7,084.7	8,716.9	7,255.7	33.5	30.4	96.08	-1,228.9	-682.6	1,615.6	1,557.5	58.12	27.799	
8,700.0	7,084.7	8,816.9	7,255.7	34.8	31.9	96.08	-1,328.9	-682.9	1,615.3	1,554.0	61.32	26.342	
8,800.0	7,084.7	8,916.9	7,255.7	36.3	33.5	96.08	-1,428.9	-683.1	1,615.0	1,550.4	64.59	25.003	
8,900.0	7,084.7	9,016.9	7,255.7	37.7	35.1	96.08	-1,528.9	-683.3	1,614.7	1,546.7	67.92	23.773	
9,000.0	7,084.7	9,116.9	7,255.7	39.2	36.8	96.08	-1,628.9	-683.6	1,614.3	1,543.0	71.30	22.642	
9,100.0	7,084.7	9,216.9	7,255.7	40.8	38.5	96.08	-1,728.9	-683.8	1,614.0	1,539.3	74.72	21.601	
9,200.0	7,084.7	9,316.9	7,255.7	42.4	40.2	96.08	-1,828.9	-684.0	1,613.7	1,535.5	78.18	20.641	
9,300.0	7,084.7	9,416.9	7,255.7	44.0	41.9	96.08	-1,928.9	-684.3	1,613.4	1,531.7	81.67	19.755	
9,400.0	7,084.7	9,516.9	7,255.7	45.6	43.6	96.09	-2,028.9	-684.5	1,613.1	1,527.9	85.19	18.935	
9,500.0	7,084.7	9,616.9	7,255.7	47.3	45.4	96.09	-2,128.9	-684.7	1,612.8	1,524.0	88.74	18.175	
9,600.0	7,084.7	9,716.9	7,255.7	49.0	47.1	96.09	-2,228.9	-685.0	1,612.5	1,520.2	92.31	17.469	
9,700.0	7,084.7	9,816.9	7,255.7	50.7	48.9	96.09	-2,328.9	-685.2	1,612.2	1,516.3	95.89	16.812	
9,800.0	7,084.7	9,916.9	7,255.7	52.4	50.7	96.09	-2,428.9	-685.4	1,611.8	1,512.3	99.50	16.199	
9,900.0	7,084.7	10,016.9	7,255.7	54.1	52.5	96.09	-2,528.9	-685.6	1,611.5	1,508.4	103.12	15.627	
10,000.0	7,084.7	10,116.9	7,255.7	55.8	54.3	96.09	-2,628.9	-685.9	1,611.2	1,504.5	106.76	15.092	
10,100.0	7,084.7	10,216.9	7,255.7	57.6	56.1	96.09	-2,728.9	-686.1	1,610.9	1,500.5	110.41	14.591	
10,200.0	7,084.7	10,316.9	7,255.7	59.4	57.9	96.09	-2,828.9	-686.3	1,610.6	1,496.5	114.07	14.120	
10,300.0	7,084.7	10,416.9	7,255.7	61.1	59.8	96.10	-2,928.9	-686.6	1,610.3	1,492.5	117.74	13.677	

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

Company:	Great Western	**Local Co-ordinate Reference:**	Well Gustafson EF 31-372HN
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 31-372HN	**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

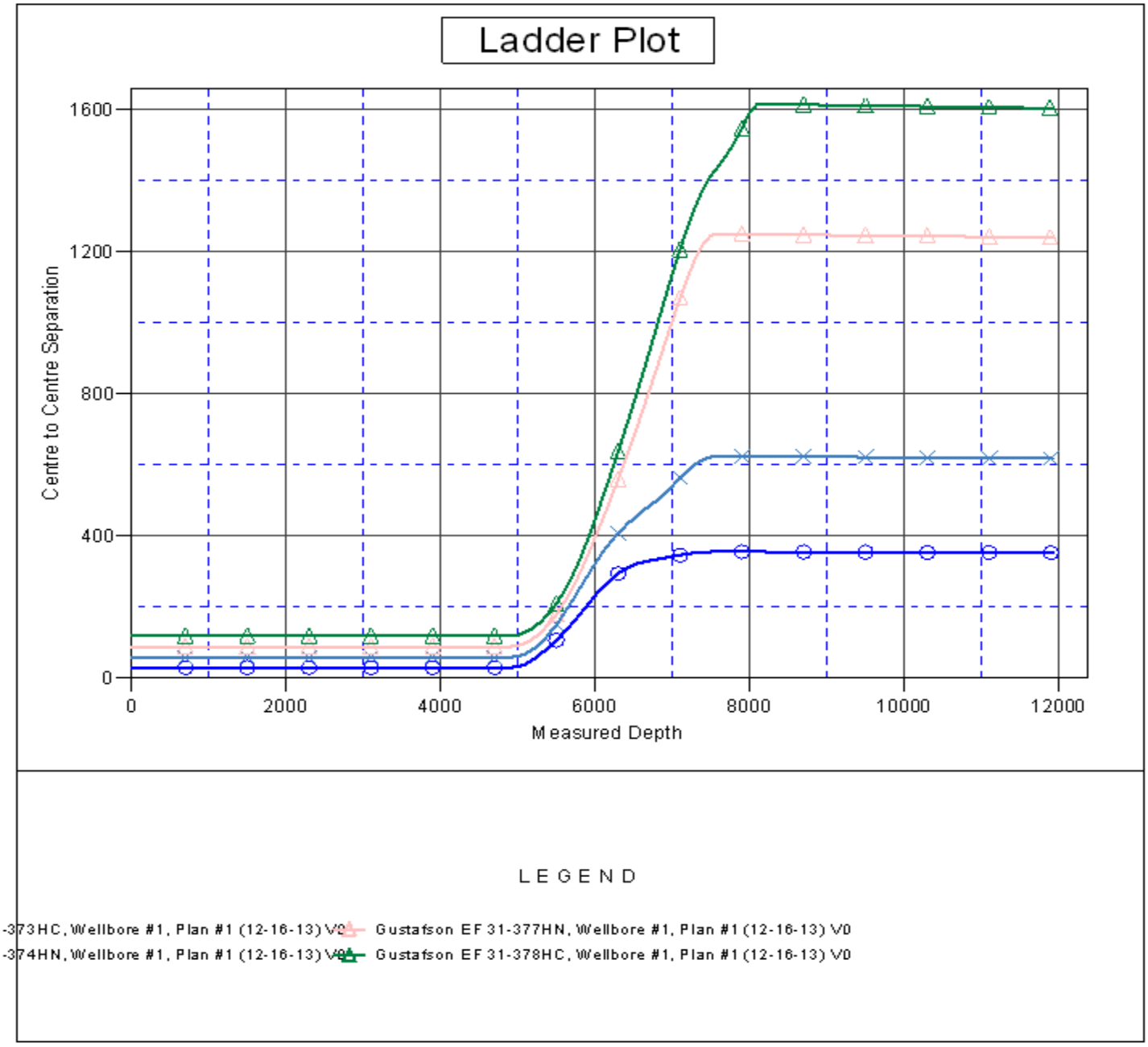
Offset Well Error: 0.0 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,400.0	7,084.7	10,516.9	7,255.7	62.9	61.6	96.10	-3,028.9	-686.8	1,610.0	1,488.6	121.42	13.260	
10,500.0	7,084.7	10,616.9	7,255.7	64.7	63.4	96.10	-3,128.9	-687.0	1,609.7	1,484.6	125.11	12.866	
10,600.0	7,084.7	10,716.9	7,255.7	66.5	65.3	96.10	-3,228.9	-687.3	1,609.4	1,480.5	128.81	12.494	
10,700.0	7,084.7	10,816.9	7,255.7	68.3	67.1	96.10	-3,328.9	-687.5	1,609.0	1,476.5	132.51	12.143	
10,800.0	7,084.7	10,916.9	7,255.7	70.1	69.0	96.10	-3,428.9	-687.7	1,608.7	1,472.5	136.22	11.810	
10,900.0	7,084.7	11,016.9	7,255.7	71.9	70.8	96.10	-3,528.9	-688.0	1,608.4	1,468.5	139.94	11.494	
11,000.0	7,084.7	11,116.9	7,255.7	73.8	72.7	96.10	-3,628.9	-688.2	1,608.1	1,464.4	143.66	11.194	
11,100.0	7,084.7	11,216.9	7,255.7	75.6	74.6	96.11	-3,728.9	-688.4	1,607.8	1,460.4	147.39	10.908	
11,200.0	7,084.7	11,316.9	7,255.7	77.4	76.4	96.11	-3,828.9	-688.7	1,607.5	1,456.4	151.12	10.637	
11,300.0	7,084.7	11,416.9	7,255.7	79.3	78.3	96.11	-3,928.9	-688.9	1,607.2	1,452.3	154.86	10.378	
11,400.0	7,084.7	11,516.9	7,255.7	81.1	80.2	96.11	-4,028.9	-689.1	1,606.9	1,448.3	158.60	10.131	
11,500.0	7,084.7	11,616.9	7,255.7	82.9	82.0	96.11	-4,128.9	-689.4	1,606.5	1,444.2	162.35	9.896	
11,600.0	7,084.7	11,716.9	7,255.7	84.8	83.9	96.11	-4,228.9	-689.6	1,606.2	1,440.1	166.10	9.670	
11,700.0	7,084.7	11,816.9	7,255.7	86.6	85.8	96.11	-4,328.9	-689.8	1,605.9	1,436.1	169.85	9.455	
11,800.0	7,084.7	11,916.9	7,255.7	88.5	87.7	96.11	-4,428.9	-690.1	1,605.6	1,432.0	173.61	9.249	
11,884.1	7,084.7	12,001.0	7,255.7	90.1	89.2	96.11	-4,513.0	-690.3	1,605.3	1,428.6	176.77	9.082	
11,900.0	7,084.7	12,003.1	7,255.7	90.4	89.3	96.11	-4,515.1	-690.3	1,605.4	1,428.3	177.11	9.064	
11,925.4	7,084.7	12,003.1	7,255.7	90.8	89.3	96.11	-4,515.1	-690.3	1,605.7	1,428.1	177.58	9.042	

Company:	Great Western	**Local Co-ordinate Reference:**	Well Gustafson EF 31-372HN
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 31-372HN	**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 31-372HN
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 31-372HN
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 31-372HN	**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)	Coordinates are relative to: Gustafson EF 31-372HN
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, Colorado Northern Zone
Central Meridian is -105.500000 °	Grid Convergence at Surface is: 0.51°