

# Great Western

Well Name: **Gustafson EF 31-377HN**

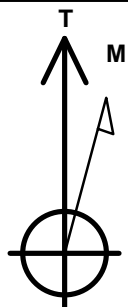
Surface Location: Gustafson Pad Sec.31-T7N-R65W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4828.2

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1439921.78	3219273.45	40.538308	-104.711072	
RKB - 16.5 WELL @ 4844.7ft (RKB - 16.5)						

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 280'FNL & 1327'FWL	1.0	0.0	0.0	Point
BHL 470'FSL & 1091'FWL	7084.7	-4527.4	-245.8	Point
Entry Pt. 460'FNL & 1096'FWL	7084.7	-173.8	-232.4	Point



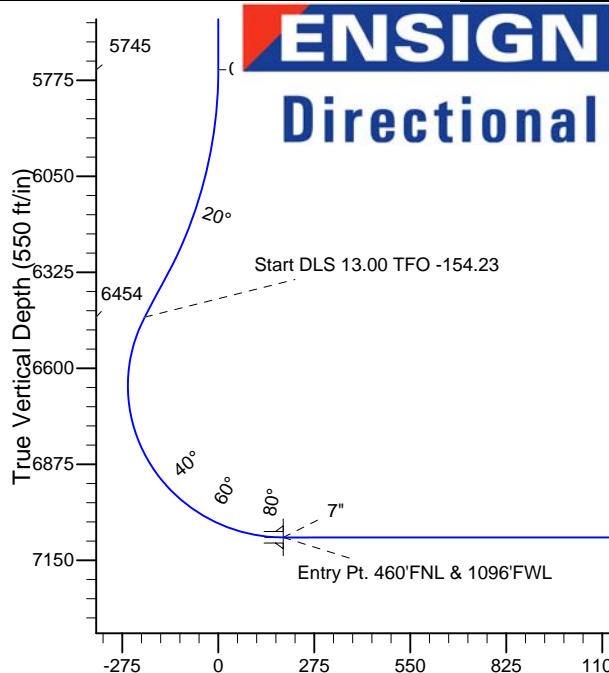
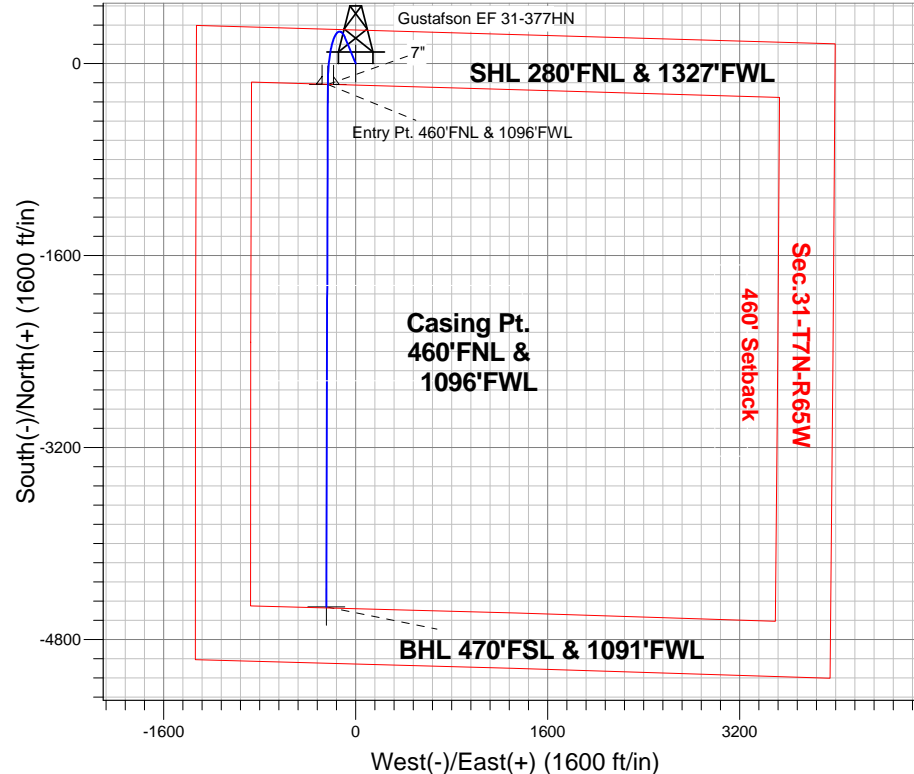
Azimuths to True North  
Magnetic North: 8.51°

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

Gustafson Pad Sec.31-T7N-R65W  
Gustafson EF 31-377HN  
Plan #1 (12-16-13)  
14:01, December 18 2013

## ANNOTATIONS

TVD	MD	Annotation
5745.0	5745.0	KOP - Start Build 5.00
6454.0	6502.7	Start DLS 13.00 TFO -154.23
7084.7	11762.7	TD at 11762.7



## 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	5745.0	0.00	0.00	5745.0	0.0	0.0	0.00	0.00	0.0	
3	6352.5	30.38	337.55	6324.5	145.4	-60.1	5.00	337.55	-141.9	
4	6502.7	30.38	337.55	6454.0	215.6	-89.1	0.00	0.00	-210.4	
5	7409.1	90.00	180.17	7084.7	-173.8	-232.4	13.00	-154.23	186.1	Entry Pt. 460'FNL & 1096'FWL
6	7409.7	90.00	180.18	7084.7	-174.4	-232.4	1.00	90.00	186.7	
7	11762.7	90.00	180.18	7084.7	-4527.4	-245.8	0.00	0.00	4534.0	BHL 470'FSL & 1091'FWL

Vertical Section at 183.11° (550 ft/in)



## **Great Western**

**SEC.31-T7N-R65W**

**Gustafson Pad Sec.31-T7N-R65W**

**Gustafson EF 31-377HN**

**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	
5,745.0	0.00	0.00	5,745.0	0.0	0.0	0.00	0.00	0.00	0.00	
6,352.5	30.38	337.55	6,324.5	145.4	-60.1	5.00	5.00	0.00	337.55	
6,502.7	30.38	337.55	6,454.0	215.6	-89.1	0.00	0.00	0.00	0.00	
7,409.1	90.00	180.17	7,084.7	-173.8	-232.4	13.00	6.58	-17.36	-154.23	Entry Pt. 460'FNL & 100'FSL
7,409.7	90.00	180.18	7,084.7	-174.4	-232.4	1.00	0.00	1.00	90.00	
11,762.7	90.00	180.18	7,084.7	-4,527.4	-245.8	0.00	0.00	0.00	0.00	BHL 470'FSL & 100'FNL

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Gustafson EF 31-377HN
<b>Company:</b>	Great Western	<b>TVD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Project:</b>	SEC.31-T7N-R65W	<b>MD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Site:</b>	Gustafson Pad Sec.31-T7N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Gustafson EF 31-377HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	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
<b>SHL 280'FNL &amp; 1327'FWL</b>									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,100.0	0.00	0.00	5,100.0	0.0	0.0	0.0	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Gustafson EF 31-377HN
<b>Company:</b>	Great Western	<b>TVD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Project:</b>	SEC.31-T7N-R65W	<b>MD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Site:</b>	Gustafson Pad Sec.31-T7N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Gustafson EF 31-377HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (12-16-13)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,200.0	0.00	0.00	5,200.0	0.0	0.0	0.0	0.00	0.00	0.00
5,300.0	0.00	0.00	5,300.0	0.0	0.0	0.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,400.0	0.0	0.0	0.0	0.00	0.00	0.00
5,500.0	0.00	0.00	5,500.0	0.0	0.0	0.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,600.0	0.0	0.0	0.0	0.00	0.00	0.00
5,700.0	0.00	0.00	5,700.0	0.0	0.0	0.0	0.00	0.00	0.00
5,745.0	0.00	0.00	5,745.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP - Start Build 5.00									
5,800.0	2.75	337.55	5,800.0	1.2	-0.5	-1.2	5.00	5.00	0.00
5,900.0	7.75	337.55	5,899.5	9.7	-4.0	-9.4	5.00	5.00	0.00
6,000.0	12.75	337.55	5,997.9	26.1	-10.8	-25.5	5.00	5.00	0.00
6,100.0	17.75	337.55	6,094.3	50.4	-20.8	-49.2	5.00	5.00	0.00
6,200.0	22.75	337.55	6,188.1	82.4	-34.0	-80.4	5.00	5.00	0.00
6,300.0	27.75	337.55	6,278.6	121.8	-50.3	-118.9	5.00	5.00	0.00
6,352.5	30.38	337.55	6,324.5	145.4	-60.1	-141.9	5.00	5.00	0.00
6,400.0	30.38	337.55	6,365.4	167.6	-69.2	-163.6	0.00	0.00	0.00
6,500.0	30.38	337.55	6,451.7	214.3	-88.5	-209.2	0.00	0.00	0.00
6,502.7	30.38	337.55	6,454.0	215.6	-89.1	-210.4	0.00	0.00	0.00
Start DLS 13.00 TFO -154.23									
6,600.0	19.70	321.15	6,542.2	251.2	-108.8	-245.0	13.00	-10.97	-16.86
6,700.0	12.89	280.00	6,638.4	266.4	-130.5	-258.9	13.00	-6.81	-41.15
6,800.0	16.63	229.18	6,735.4	258.9	-152.4	-250.3	13.00	3.74	-50.82
6,900.0	26.82	206.65	6,828.4	229.3	-173.4	-219.5	13.00	10.19	-22.53
7,000.0	38.65	196.54	6,912.4	179.0	-192.5	-168.3	13.00	11.83	-10.11
7,100.0	50.99	190.69	6,983.2	110.5	-208.7	-99.1	13.00	12.34	-5.85
7,200.0	63.54	186.61	7,037.2	27.5	-221.1	-15.5	13.00	12.54	-4.08
7,300.0	76.17	183.35	7,071.6	-65.8	-229.1	78.1	13.00	12.64	-3.26
7,400.0	88.85	180.43	7,084.6	-164.7	-232.3	177.0	13.00	12.67	-2.92
7,409.1	90.00	180.17	7,084.7	-173.8	-232.4	186.1	12.99	12.67	-2.86
7" - Entry Pt. 460'FNL & 1096'FWL									
7,409.7	90.00	180.18	7,084.7	-174.4	-232.4	186.7	0.98	0.14	0.97
7,500.0	90.00	180.18	7,084.7	-264.7	-232.6	276.9	0.00	0.00	0.00
7,600.0	90.00	180.18	7,084.7	-364.7	-233.0	376.8	0.00	0.00	0.00
7,700.0	90.00	180.18	7,084.7	-464.7	-233.3	476.6	0.00	0.00	0.00
7,800.0	90.00	180.18	7,084.7	-564.7	-233.6	576.5	0.00	0.00	0.00
7,900.0	90.00	180.18	7,084.7	-664.7	-233.9	676.4	0.00	0.00	0.00
8,000.0	90.00	180.18	7,084.7	-764.7	-234.2	776.2	0.00	0.00	0.00
8,100.0	90.00	180.18	7,084.7	-864.7	-234.5	876.1	0.00	0.00	0.00
8,200.0	90.00	180.18	7,084.7	-964.7	-234.8	976.0	0.00	0.00	0.00
8,300.0	90.00	180.18	7,084.7	-1,064.7	-235.1	1,075.8	0.00	0.00	0.00
8,400.0	90.00	180.18	7,084.7	-1,164.7	-235.4	1,175.7	0.00	0.00	0.00
8,500.0	90.00	180.18	7,084.7	-1,264.7	-235.7	1,275.6	0.00	0.00	0.00
8,600.0	90.00	180.18	7,084.7	-1,364.7	-236.0	1,375.4	0.00	0.00	0.00
8,700.0	90.00	180.18	7,084.7	-1,464.7	-236.3	1,475.3	0.00	0.00	0.00
8,800.0	90.00	180.18	7,084.7	-1,564.7	-236.6	1,575.2	0.00	0.00	0.00
8,900.0	90.00	180.18	7,084.7	-1,664.7	-237.0	1,675.1	0.00	0.00	0.00
9,000.0	90.00	180.18	7,084.7	-1,764.7	-237.3	1,774.9	0.00	0.00	0.00
9,100.0	90.00	180.18	7,084.7	-1,864.7	-237.6	1,874.8	0.00	0.00	0.00
9,200.0	90.00	180.18	7,084.7	-1,964.7	-237.9	1,974.7	0.00	0.00	0.00
9,300.0	90.00	180.18	7,084.7	-2,064.7	-238.2	2,074.5	0.00	0.00	0.00
9,400.0	90.00	180.18	7,084.7	-2,164.7	-238.5	2,174.4	0.00	0.00	0.00
9,500.0	90.00	180.18	7,084.7	-2,264.7	-238.8	2,274.3	0.00	0.00	0.00
9,600.0	90.00	180.18	7,084.7	-2,364.7	-239.1	2,374.1	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Gustafson EF 31-377HN
<b>Company:</b>	Great Western	<b>TVD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Project:</b>	SEC.31-T7N-R65W	<b>MD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Site:</b>	Gustafson Pad Sec.31-T7N-R65W	<b>North Reference:</b>	True
<b>Well:</b>	Gustafson EF 31-377HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	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)	
9,700.0	90.00	180.18	7,084.7	-2,464.7	-239.4	2,474.0	0.00	0.00	0.00	
9,800.0	90.00	180.18	7,084.7	-2,564.7	-239.7	2,573.9	0.00	0.00	0.00	
9,900.0	90.00	180.18	7,084.7	-2,664.7	-240.0	2,673.7	0.00	0.00	0.00	
10,000.0	90.00	180.18	7,084.7	-2,764.7	-240.3	2,773.6	0.00	0.00	0.00	
10,100.0	90.00	180.18	7,084.7	-2,864.6	-240.6	2,873.5	0.00	0.00	0.00	
10,200.0	90.00	180.18	7,084.7	-2,964.6	-240.9	2,973.4	0.00	0.00	0.00	
10,300.0	90.00	180.18	7,084.7	-3,064.6	-241.3	3,073.2	0.00	0.00	0.00	
10,400.0	90.00	180.18	7,084.7	-3,164.6	-241.6	3,173.1	0.00	0.00	0.00	
10,500.0	90.00	180.18	7,084.7	-3,264.6	-241.9	3,273.0	0.00	0.00	0.00	
10,600.0	90.00	180.18	7,084.7	-3,364.6	-242.2	3,372.8	0.00	0.00	0.00	
10,700.0	90.00	180.18	7,084.7	-3,464.6	-242.5	3,472.7	0.00	0.00	0.00	
10,800.0	90.00	180.18	7,084.7	-3,564.6	-242.8	3,572.6	0.00	0.00	0.00	
10,900.0	90.00	180.18	7,084.7	-3,664.6	-243.1	3,672.4	0.00	0.00	0.00	
11,000.0	90.00	180.18	7,084.7	-3,764.6	-243.4	3,772.3	0.00	0.00	0.00	
11,100.0	90.00	180.18	7,084.7	-3,864.6	-243.7	3,872.2	0.00	0.00	0.00	
11,200.0	90.00	180.18	7,084.7	-3,964.6	-244.0	3,972.0	0.00	0.00	0.00	
11,300.0	90.00	180.18	7,084.7	-4,064.6	-244.3	4,071.9	0.00	0.00	0.00	
11,400.0	90.00	180.18	7,084.7	-4,164.6	-244.6	4,171.8	0.00	0.00	0.00	
11,500.0	90.00	180.18	7,084.7	-4,264.6	-244.9	4,271.7	0.00	0.00	0.00	
11,600.0	90.00	180.18	7,084.7	-4,364.6	-245.3	4,371.5	0.00	0.00	0.00	
11,700.0	90.00	180.18	7,084.7	-4,464.6	-245.6	4,471.4	0.00	0.00	0.00	
11,762.7	90.00	180.18	7,084.7	-4,527.3	-245.8	4,534.0	0.00	0.00	0.00	
TD at 11762.7 - BHL 470'FSL & 1091'FWL										

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
7,409.1	7,084.7	7"	7	7-1/2	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
5,745.0	5,745.0	0.0	0.0	KOP - Start Build 5.00	
6,502.7	6,454.0	215.6	-89.1	Start DLS 13.00 TFO -154.23	
11,762.7	7,084.7	-4,527.3	-245.8	TD at 11762.7	



## **Great Western**

**SEC.31-T7N-R65W**

**Gustafson Pad Sec.31-T7N-R65W**

**Gustafson EF 31-377HN**

**Wellbore #1**

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

## **Anticollision Report**

**18 December, 2013**

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Gustafson EF 31-377HN
<b>Project:</b>	SEC.31-T7N-R65W	<b>TVD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Reference Site:</b>	Gustafson Pad Sec.31-T7N-R65W	<b>MD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Gustafson EF 31-377HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (12-16-13)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #1 (12-16-13)		
<b>Filter type:</b>	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
<b>Interpolation Method:</b>	MD Interval 100.0ft	<b>Error Model:</b>	ISCWSA
<b>Depth Range:</b>	Unlimited	<b>Scan Method:</b>	Closest Approach 3D
<b>Results Limited by:</b>	Maximum center-center distance of 10,000.0ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>	<b>Date</b> 12/17/2013			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	11,762.1	Plan #1 (12-16-13) (Wellbore #1)	MWD	MWD - Standard

<b>Summary</b>						
<b>Site Name</b>	<b>Reference Measured Depth (ft)</b>	<b>Offset Measured Depth (ft)</b>	<b>Distance Between Centres (ft)</b>	<b>Distance Between Ellipses (ft)</b>	<b>Separation Factor</b>	<b>Warning</b>
<b>Offset Well - Wellbore - Design</b>						
Gustafson Pad Sec.31-T7N-R65W						
Gustafson EF 31-373HC - Wellbore #1 - Plan #1 (12-16-	5,200.0	5,200.0	59.5	36.4	2.570	CC, ES, SF
Gustafson EF 31-374HN - Wellbore #1 - Plan #1 (12-16-	5,500.0	5,500.0	30.0	5.5	1.226	Level 2, CC, ES, SF
Gustafson EF 31-378HC - Wellbore #1 - Plan #1 (12-16-	5,500.0	5,500.0	30.3	5.8	1.237	Level 2, CC, ES, SF
Gustafson EF 31-379HN - Wellbore #1 - Plan #1 (12-16-	5,033.4	5,033.4	60.3	37.9	2.693	CC, ES
Gustafson EF 31-379HN - Wellbore #1 - Plan #1 (12-16-	5,100.0	5,098.6	60.9	38.2	2.684	SF
Gustafson EF 31-380HN - Wellbore #1 - Plan #1 (12-16-	4,400.0	4,400.0	90.4	70.8	4.621	CC, ES, SF

<b>Offset Design</b>	Gustafson Pad Sec.31-T7N-R65W - Gustafson EF 31-373HC - Wellbore #1 - Plan #1 (12-16-13)											<b>Offset Site Error:</b>	0.0 ft
<b>Survey Program:</b>	0-MWD											<b>Offset Well Error:</b>	0.0 ft
<b>Reference</b>	<b>Offset</b>	<b>Semi Major Axis</b>	<b>Distance</b>	<b>Minimum Separation</b>	<b>Separation Factor</b>	<b>Warning</b>							
<b>Measured Depth (ft)</b>	<b>Vertical Depth (ft)</b>	<b>Measured Depth (ft)</b>	<b>Vertical Depth (ft)</b>	<b>Reference (ft)</b>	<b>Offset (ft)</b>	<b>Highside Toolface (°)</b>	<b>Offset Wellbore Centre +N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Between Centres (ft)</b>	<b>Between Ellipses (ft)</b>	<b>Minimum Separation (ft)</b>	<b>Separation Factor</b>	
0.0	0.0	0.0	0.0	0.0	0.0	91.74	-1.8	59.5	59.5				
100.0	100.0	100.0	100.0	0.1	0.1	91.74	-1.8	59.5	59.5	59.3	0.22	264.760	
200.0	200.0	200.0	200.0	0.3	0.3	91.74	-1.8	59.5	59.5	58.8	0.67	88.253	
300.0	300.0	300.0	300.0	0.6	0.6	91.74	-1.8	59.5	59.5	58.4	1.12	52.952	
400.0	400.0	400.0	400.0	0.8	0.8	91.74	-1.8	59.5	59.5	57.9	1.57	37.823	
500.0	500.0	500.0	500.0	1.0	1.0	91.74	-1.8	59.5	59.5	57.5	2.02	29.418	
600.0	600.0	600.0	600.0	1.2	1.2	91.74	-1.8	59.5	59.5	57.0	2.47	24.069	
700.0	700.0	700.0	700.0	1.5	1.5	91.74	-1.8	59.5	59.5	56.6	2.92	20.366	
800.0	800.0	800.0	800.0	1.7	1.7	91.74	-1.8	59.5	59.5	56.1	3.37	17.651	
900.0	900.0	900.0	900.0	1.9	1.9	91.74	-1.8	59.5	59.5	55.7	3.82	15.574	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	91.74	-1.8	59.5	59.5	55.2	4.27	13.935	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	91.74	-1.8	59.5	59.5	54.8	4.72	12.608	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	91.74	-1.8	59.5	59.5	54.3	5.17	11.511	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	91.74	-1.8	59.5	59.5	53.9	5.62	10.590	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	91.74	-1.8	59.5	59.5	53.4	6.07	9.806	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	91.74	-1.8	59.5	59.5	53.0	6.52	9.130	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	91.74	-1.8	59.5	59.5	52.5	6.97	8.541	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	91.74	-1.8	59.5	59.5	52.1	7.42	8.023	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	91.74	-1.8	59.5	59.5	51.6	7.87	7.565	
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	91.74	-1.8	59.5	59.5	51.2	8.32	7.156	
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	91.74	-1.8	59.5	59.5	50.7	8.77	6.789	

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



<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Gustafson EF 31-377HN
<b>Project:</b>	SEC.31-T7N-R65W	<b>TVD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Reference Site:</b>	Gustafson Pad Sec.31-T7N-R65W	<b>MD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Gustafson EF 31-377HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (12-16-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	91.74	-1.8	59.5	59.5	50.3	9.22	6.458		
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	91.74	-1.8	59.5	59.5	49.8	9.66	6.157		
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	91.74	-1.8	59.5	59.5	49.4	10.11	5.884		
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	91.74	-1.8	59.5	59.5	48.9	10.56	5.633		
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	91.74	-1.8	59.5	59.5	48.5	11.01	5.403		
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	91.74	-1.8	59.5	59.5	48.0	11.46	5.191		
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	91.74	-1.8	59.5	59.5	47.6	11.91	4.995		
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	91.74	-1.8	59.5	59.5	47.1	12.36	4.814		
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	91.74	-1.8	59.5	59.5	46.7	12.81	4.645		
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	91.74	-1.8	59.5	59.5	46.2	13.26	4.487		
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	91.74	-1.8	59.5	59.5	45.8	13.71	4.340		
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	91.74	-1.8	59.5	59.5	45.3	14.16	4.203		
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	91.74	-1.8	59.5	59.5	44.9	14.61	4.073		
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	91.74	-1.8	59.5	59.5	44.4	15.06	3.952		
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	91.74	-1.8	59.5	59.5	44.0	15.51	3.837		
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	91.74	-1.8	59.5	59.5	43.6	15.96	3.729		
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	91.74	-1.8	59.5	59.5	43.1	16.41	3.627		
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	91.74	-1.8	59.5	59.5	42.7	16.86	3.530		
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	91.74	-1.8	59.5	59.5	42.2	17.31	3.438		
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	91.74	-1.8	59.5	59.5	41.8	17.76	3.351		
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	91.74	-1.8	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	91.74	-1.8	59.5	59.5	40.9	18.66	3.190		
4,300.0	4,300.0	4,300.0	4,300.0	9.6	9.6	91.74	-1.8	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	91.74	-1.8	59.5	59.5	40.0	19.55	3.043		
4,500.0	4,500.0	4,500.0	4,500.0	10.0	10.0	91.74	-1.8	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	91.74	-1.8	59.5	59.5	39.1	20.45	2.909		
4,700.0	4,700.0	4,700.0	4,700.0	10.5	10.5	91.74	-1.8	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	91.74	-1.8	59.5	59.5	38.2	21.35	2.787		
4,900.0	4,900.0	4,900.0	4,900.0	10.9	10.9	91.74	-1.8	59.5	59.5	37.7	21.80	2.729		
5,000.0	5,000.0	5,000.0	5,000.0	11.1	11.1	91.74	-1.8	59.5	59.5	37.3	22.25	2.674		
5,100.0	5,100.0	5,100.0	5,100.0	11.4	11.4	91.74	-1.8	59.5	59.5	36.8	22.70	2.621		
5,200.0	5,200.0	5,200.0	5,200.0	11.6	11.6	91.74	-1.8	59.5	59.5	36.4	23.15	2.570 CC, ES, SF		
5,300.0	5,300.0	5,298.2	5,298.2	11.8	11.8	90.91	-1.0	60.9	61.0	37.4	23.59	2.585		
5,400.0	5,400.0	5,396.2	5,396.1	12.0	12.0	88.66	1.5	65.3	65.4	41.4	24.02	2.725		
5,500.0	5,500.0	5,493.7	5,493.2	12.2	12.2	85.52	5.7	72.5	73.1	48.6	24.45	2.989		
5,600.0	5,600.0	5,590.6	5,589.4	12.5	12.4	82.12	11.4	82.5	84.0	59.1	24.88	3.376		
5,700.0	5,700.0	5,686.6	5,684.2	12.7	12.6	78.89	18.7	95.2	98.3	73.0	25.31	3.885		
5,800.0	5,800.0	5,781.5	5,777.5	12.9	12.9	98.60	27.5	110.5	116.3	90.5	25.73	4.519		
5,900.0	5,899.5	5,874.9	5,868.7	13.1	13.1	98.68	37.6	128.1	138.5	112.4	26.14	5.299		
6,000.0	5,997.9	5,966.2	5,957.1	13.4	13.4	100.77	48.9	147.8	165.4	138.8	26.54	6.231		
6,100.0	6,094.3	6,054.6	6,042.0	13.6	13.6	103.66	61.2	169.2	197.4	170.5	26.92	7.334		
6,200.0	6,188.1	6,139.6	6,122.8	13.9	13.9	106.60	74.2	191.9	235.4	208.1	27.28	8.627		
6,300.0	6,278.6	6,220.5	6,199.1	14.2	14.2	109.13	87.7	215.5	279.5	251.9	27.63	10.116		
6,400.0	6,365.4	6,300.0	6,273.2	14.5	14.5	112.40	102.0	240.4	329.7	301.7	28.01	11.771		
6,500.0	6,451.7	6,372.5	6,340.0	15.0	14.8	115.58	115.9	264.7	383.3	354.8	28.47	13.465		
6,600.0	6,542.2	6,447.5	6,408.4	15.4	15.1	139.75	131.2	291.4	438.7	409.8	28.82	15.222		
6,700.0	6,638.4	6,520.6	6,474.3	15.7	15.5	-174.56	147.0	318.9	493.0	463.5	29.51	16.706		
6,800.0	6,735.4	6,587.3	6,533.8	15.9	15.9	-121.32	162.1	345.2	545.5	515.3	30.22	18.053		
6,900.0	6,828.4	6,644.2	6,583.8	15.9	16.2	-97.15	175.5	368.6	597.0	566.3	30.73	19.431		
7,000.0	6,912.4	6,688.6	6,622.5	16.0	16.5	-85.19	186.4	387.5	648.4	617.5	30.92	20.971		
7,100.0	6,983.2	6,719.4	6,649.2	15.9	16.7	-76.81	194.1	400.8	700.0	669.3	30.71	22.799		
7,200.0	7,037.2	6,739.6	6,666.6	15.9	16.8	-69.79	199.1	409.7	751.5	721.4	30.03	25.022		

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

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Gustafson EF 31-377HN
<b>Project:</b>	SEC.31-T7N-R65W	<b>TVD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Reference Site:</b>	Gustafson Pad Sec.31-T7N-R65W	<b>MD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Gustafson EF 31-377HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (12-16-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
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		
7,300.0	7,071.6	6,742.3	6,668.9	16.0	16.8	-62.92	199.8	410.9	801.4	772.6	28.85	27.781		
7,400.0	7,084.6	6,727.3	6,655.9	16.4	16.7	-56.40	196.0	404.3	848.0	820.6	27.44	30.910		
7,500.0	7,084.7	6,705.9	6,637.5	16.9	16.6	-54.47	190.7	394.9	895.1	867.8	27.31	32.773		
7,600.0	7,084.7	6,686.9	6,621.1	17.6	16.5	-53.12	186.0	386.7	949.8	922.3	27.56	34.465		
7,700.0	7,084.7	7,925.3	7,255.7	18.6	22.1	-100.33	-469.1	705.0	953.7	917.3	36.45	26.165		
7,800.0	7,084.7	8,025.3	7,255.7	19.6	23.0	-100.33	-569.1	704.5	953.6	915.0	38.52	24.756		
7,900.0	7,084.7	8,125.3	7,255.7	20.8	23.9	-100.33	-669.1	704.0	953.4	912.6	40.83	23.348		
8,000.0	7,084.7	8,225.3	7,255.7	22.1	25.0	-100.33	-769.1	703.6	953.2	909.9	43.36	21.984		
8,100.0	7,084.7	8,325.3	7,255.7	23.5	26.2	-100.34	-869.1	703.1	953.1	907.0	46.06	20.693		
8,200.0	7,084.7	8,425.3	7,255.7	24.9	27.5	-100.34	-969.1	702.6	952.9	904.0	48.90	19.486		
8,300.0	7,084.7	8,525.3	7,255.7	26.4	28.8	-100.34	-1,069.1	702.1	952.7	900.9	51.87	18.369		
8,400.0	7,084.7	8,625.3	7,255.7	28.0	30.3	-100.34	-1,169.1	701.7	952.6	897.6	54.93	17.340		
8,500.0	7,084.7	8,725.3	7,255.7	29.6	31.7	-100.34	-1,269.1	701.2	952.4	894.3	58.09	16.397		
8,600.0	7,084.7	8,825.3	7,255.7	31.2	33.2	-100.35	-1,369.1	700.7	952.2	890.9	61.31	15.532		
8,700.0	7,084.7	8,925.3	7,255.7	32.9	34.8	-100.35	-1,469.1	700.2	952.1	887.5	64.60	14.739		
8,800.0	7,084.7	9,025.3	7,255.7	34.6	36.4	-100.35	-1,569.1	699.8	951.9	884.0	67.93	14.012		
8,900.0	7,084.7	9,125.3	7,255.7	36.3	38.0	-100.35	-1,669.1	699.3	951.7	880.4	71.32	13.345		
9,000.0	7,084.7	9,225.3	7,255.7	38.0	39.7	-100.35	-1,769.1	698.8	951.6	876.8	74.74	12.732		
9,100.0	7,084.7	9,325.3	7,255.7	39.8	41.4	-100.35	-1,869.1	698.3	951.4	873.2	78.20	12.167		
9,200.0	7,084.7	9,425.3	7,255.7	41.6	43.1	-100.36	-1,969.1	697.9	951.2	869.6	81.68	11.645		
9,300.0	7,084.7	9,525.3	7,255.7	43.3	44.8	-100.36	-2,069.1	697.4	951.1	865.9	85.20	11.163		
9,400.0	7,084.7	9,625.3	7,255.7	45.1	46.5	-100.36	-2,169.1	696.9	950.9	862.2	88.73	10.717		
9,500.0	7,084.7	9,725.3	7,255.7	46.9	48.3	-100.36	-2,269.1	696.4	950.7	858.5	92.29	10.302		
9,600.0	7,084.7	9,825.3	7,255.7	48.7	50.0	-100.36	-2,369.1	695.9	950.6	854.7	95.86	9.916		
9,700.0	7,084.7	9,925.3	7,255.7	50.6	51.8	-100.37	-2,469.1	695.5	950.4	851.0	99.45	9.557		
9,800.0	7,084.7	10,025.3	7,255.7	52.4	53.6	-100.37	-2,569.1	695.0	950.2	847.2	103.05	9.221		
9,900.0	7,084.7	10,125.3	7,255.7	54.2	55.4	-100.37	-2,669.1	694.5	950.1	843.4	106.67	8.907		
10,000.0	7,084.7	10,225.3	7,255.7	56.1	57.2	-100.37	-2,769.1	694.0	949.9	839.6	110.30	8.612		
10,100.0	7,084.7	10,325.3	7,255.7	57.9	59.0	-100.37	-2,869.1	693.6	949.7	835.8	113.93	8.336		
10,200.0	7,084.7	10,425.3	7,255.7	59.8	60.8	-100.37	-2,969.1	693.1	949.6	832.0	117.58	8.076		
10,300.0	7,084.7	10,525.3	7,255.7	61.6	62.6	-100.38	-3,069.1	692.6	949.4	828.2	121.24	7.831		
10,400.0	7,084.7	10,625.3	7,255.7	63.5	64.4	-100.38	-3,169.1	692.1	949.2	824.3	124.90	7.600		
10,500.0	7,084.7	10,725.3	7,255.7	65.3	66.3	-100.38	-3,269.1	691.7	949.1	820.5	128.58	7.381		
10,600.0	7,084.7	10,825.3	7,255.7	67.2	68.1	-100.38	-3,369.1	691.2	948.9	816.7	132.25	7.175		
10,700.0	7,084.7	10,925.3	7,255.7	69.1	69.9	-100.38	-3,469.1	690.7	948.7	812.8	135.94	6.979		
10,800.0	7,084.7	11,025.3	7,255.7	70.9	71.8	-100.39	-3,569.1	690.2	948.6	808.9	139.63	6.794		
10,900.0	7,084.7	11,125.3	7,255.7	72.8	73.6	-100.39	-3,669.1	689.8	948.4	805.1	143.32	6.617		
11,000.0	7,084.7	11,225.3	7,255.7	74.7	75.5	-100.39	-3,769.1	689.3	948.2	801.2	147.02	6.450		
11,100.0	7,084.7	11,325.3	7,255.7	76.6	77.3	-100.39	-3,869.1	688.8	948.1	797.3	150.73	6.290		
11,200.0	7,084.7	11,425.3	7,255.7	78.4	79.2	-100.39	-3,969.1	688.3	947.9	793.5	154.44	6.138		
11,300.0	7,084.7	11,525.3	7,255.7	80.3	81.1	-100.39	-4,069.1	687.8	947.7	789.6	158.15	5.993		
11,400.0	7,084.7	11,625.3	7,255.7	82.2	82.9	-100.40	-4,169.1	687.4	947.6	785.7	161.87	5.854		
11,500.0	7,084.7	11,725.3	7,255.7	84.1	84.8	-100.40	-4,269.1	686.9	947.4	781.8	165.59	5.722		
11,600.0	7,084.7	11,825.3	7,255.7	86.0	86.7	-100.40	-4,369.1	686.4	947.2	777.9	169.31	5.595		
11,700.0	7,084.7	11,925.3	7,255.7	87.9	88.5	-100.40	-4,469.1	685.9	947.1	774.0	173.03	5.473		
11,762.7	7,084.7	11,988.0	7,255.7	88.8	89.7	-100.40	-4,531.8	685.6	947.0	771.8	175.15	5.407		

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Gustafson EF 31-377HN
<b>Project:</b>	SEC.31-T7N-R65W	<b>TVD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Reference Site:</b>	Gustafson Pad Sec.31-T7N-R65W	<b>MD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Gustafson EF 31-377HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (12-16-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
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	91.37	-0.7	30.0	30.0					
100.0	100.0	100.0	100.0	0.1	0.1	91.37	-0.7	30.0	30.0	29.8	0.22	133.594		
200.0	200.0	200.0	200.0	0.3	0.3	91.37	-0.7	30.0	30.0	29.4	0.67	44.531		
300.0	300.0	300.0	300.0	0.6	0.6	91.37	-0.7	30.0	30.0	28.9	1.12	26.719		
400.0	400.0	400.0	400.0	0.8	0.8	91.37	-0.7	30.0	30.0	28.5	1.57	19.085		
500.0	500.0	500.0	500.0	1.0	1.0	91.37	-0.7	30.0	30.0	28.0	2.02	14.844		
600.0	600.0	600.0	600.0	1.2	1.2	91.37	-0.7	30.0	30.0	27.6	2.47	12.145		
700.0	700.0	700.0	700.0	1.5	1.5	91.37	-0.7	30.0	30.0	27.1	2.92	10.276		
800.0	800.0	800.0	800.0	1.7	1.7	91.37	-0.7	30.0	30.0	26.7	3.37	8.906		
900.0	900.0	900.0	900.0	1.9	1.9	91.37	-0.7	30.0	30.0	26.2	3.82	7.858		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	91.37	-0.7	30.0	30.0	25.8	4.27	7.031		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	91.37	-0.7	30.0	30.0	25.3	4.72	6.362		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	91.37	-0.7	30.0	30.0	24.9	5.17	5.808		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	91.37	-0.7	30.0	30.0	24.4	5.62	5.344		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	91.37	-0.7	30.0	30.0	24.0	6.07	4.948		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	91.37	-0.7	30.0	30.0	23.5	6.52	4.607		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	91.37	-0.7	30.0	30.0	23.1	6.97	4.309		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	91.37	-0.7	30.0	30.0	22.6	7.42	4.048		
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	91.37	-0.7	30.0	30.0	22.2	7.87	3.817		
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	91.37	-0.7	30.0	30.0	21.7	8.32	3.611		
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	91.37	-0.7	30.0	30.0	21.3	8.77	3.425		
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	91.37	-0.7	30.0	30.0	20.8	9.22	3.258		
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	91.37	-0.7	30.0	30.0	20.4	9.66	3.107		
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	91.37	-0.7	30.0	30.0	19.9	10.11	2.969		
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	91.37	-0.7	30.0	30.0	19.5	10.56	2.842		
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	91.37	-0.7	30.0	30.0	19.0	11.01	2.726		
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	91.37	-0.7	30.0	30.0	18.6	11.46	2.619		
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	91.37	-0.7	30.0	30.0	18.1	11.91	2.521		
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	91.37	-0.7	30.0	30.0	17.7	12.36	2.429		
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	91.37	-0.7	30.0	30.0	17.2	12.81	2.344		
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	91.37	-0.7	30.0	30.0	16.8	13.26	2.264		
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	91.37	-0.7	30.0	30.0	16.3	13.71	2.190		
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	91.37	-0.7	30.0	30.0	15.9	14.16	2.121		
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	91.37	-0.7	30.0	30.0	15.4	14.61	2.055		
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	91.37	-0.7	30.0	30.0	15.0	15.06	1.994		
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	91.37	-0.7	30.0	30.0	14.5	15.51	1.936		
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	91.37	-0.7	30.0	30.0	14.1	15.96	1.882		
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	91.37	-0.7	30.0	30.0	13.6	16.41	1.830		
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	91.37	-0.7	30.0	30.0	13.2	16.86	1.781		
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	91.37	-0.7	30.0	30.0	12.7	17.31	1.735		
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	91.37	-0.7	30.0	30.0	12.3	17.76	1.691		
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	91.37	-0.7	30.0	30.0	11.8	18.21	1.649		
4,200.0	4,200.0	4,200.0	4,200.0	9.3	9.3	91.37	-0.7	30.0	30.0	11.4	18.66	1.610		
4,300.0	4,300.0	4,300.0	4,300.0	9.6	9.6	91.37	-0.7	30.0	30.0	10.9	19.11	1.572		
4,400.0	4,400.0	4,400.0	4,400.0	9.8	9.8	91.37	-0.7	30.0	30.0	10.5	19.55	1.536		
4,500.0	4,500.0	4,500.0	4,500.0	10.0	10.0	91.37	-0.7	30.0	30.0	10.0	20.00	1.501		
4,600.0	4,600.0	4,600.0	4,600.0	10.2	10.2	91.37	-0.7	30.0	30.0	9.6	20.45	1.468 Level 3		
4,700.0	4,700.0	4,700.0	4,700.0	10.5	10.5	91.37	-0.7	30.0	30.0	9.1	20.90	1.436 Level 3		
4,800.0	4,800.0	4,800.0	4,800.0	10.7	10.7	91.37	-0.7	30.0	30.0	8.7	21.35	1.406 Level 3		
4,900.0	4,900.0	4,900.0	4,900.0	10.9	10.9	91.37	-0.7	30.0	30.0	8.2	21.80	1.377 Level 3		
5,000.0	5,000.0	5,000.0	5,000.0	11.1	11.1	91.37	-0.7	30.0	30.0	7.8	22.25	1.349 Level 3		
5,100.0	5,100.0	5,100.0	5,100.0	11.4	11.4	91.37	-0.7	30.0	30.0	7.3	22.70	1.323 Level 3		

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

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Gustafson EF 31-377HN
<b>Project:</b>	SEC.31-T7N-R65W	<b>TVD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Reference Site:</b>	Gustafson Pad Sec.31-T7N-R65W	<b>MD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Gustafson EF 31-377HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (12-16-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.0	5,200.0	5,200.0	5,200.0	11.6	11.6	91.37	-0.7	30.0	30.0	6.9	23.15	1.297	Level 3	
5,300.0	5,300.0	5,300.0	5,300.0	11.8	11.8	91.37	-0.7	30.0	30.0	6.4	23.60	1.272	Level 3	
5,400.0	5,400.0	5,400.0	5,400.0	12.0	12.0	91.37	-0.7	30.0	30.0	6.0	24.05	1.249	Level 2	
5,500.0	5,500.0	5,500.0	5,500.0	12.2	12.2	91.37	-0.7	30.0	30.0	5.5	24.50	1.226	Level 2, CC, ES, SF	
5,600.0	5,600.0	5,599.3	5,599.3	12.5	12.5	89.25	0.4	30.9	30.9	5.9	24.94	1.238	Level 2	
5,700.0	5,700.0	5,697.9	5,697.7	12.7	12.7	81.08	5.4	34.7	35.2	9.8	25.38	1.387	Level 3	
5,800.0	5,800.0	5,795.8	5,794.9	12.9	12.9	94.67	14.4	41.5	44.3	18.5	25.82	1.718		
5,900.0	5,899.5	5,892.6	5,890.3	13.1	13.1	93.55	27.2	51.2	58.7	32.4	26.24	2.235		
6,000.0	5,997.9	5,987.9	5,983.4	13.4	13.3	96.65	43.5	63.6	77.8	51.1	26.66	2.918		
6,100.0	6,094.3	6,081.2	6,073.4	13.6	13.6	100.87	63.1	78.5	102.3	75.2	27.07	3.778		
6,200.0	6,188.1	6,172.0	6,159.7	13.9	13.8	104.83	85.5	95.5	132.6	105.1	27.47	4.827		
6,300.0	6,278.6	6,260.0	6,242.0	14.2	14.1	108.03	110.2	114.3	169.0	141.1	27.86	6.065		
6,400.0	6,365.4	6,345.1	6,320.2	14.5	14.4	111.22	137.0	134.6	211.0	182.7	28.30	7.457		
6,500.0	6,451.7	6,428.8	6,395.5	15.0	14.7	113.57	166.1	156.7	256.1	227.3	28.87	8.873		
6,600.0	6,542.2	6,510.7	6,467.6	15.4	15.1	134.13	197.0	180.1	303.3	274.0	29.33	10.342		
6,700.0	6,638.4	6,588.4	6,535.5	15.7	15.4	176.48	226.5	203.9	352.1	322.1	29.93	11.765		
6,800.0	6,735.4	6,664.2	6,604.9	15.9	15.8	-131.44	244.3	228.1	402.5	372.1	30.45	13.218		
6,900.0	6,828.4	6,743.9	6,679.9	15.9	16.0	-107.83	249.2	254.3	453.2	422.3	30.86	14.683		
7,000.0	6,912.4	6,831.3	6,761.7	16.0	16.3	-97.24	238.1	282.8	502.1	471.0	31.09	16.148		
7,100.0	6,983.2	6,931.7	6,850.9	15.9	16.4	-91.88	204.5	313.7	547.0	515.9	31.13	17.574		
7,200.0	7,037.2	7,052.5	6,945.4	15.9	16.6	-89.53	137.3	346.4	585.2	554.1	31.08	18.830		
7,300.0	7,071.6	7,201.3	7,032.6	16.0	16.7	-89.18	21.6	376.3	612.9	581.7	31.25	19.615		
7,400.0	7,084.6	7,377.9	7,082.4	16.4	17.2	-89.84	-145.8	393.0	625.6	593.5	32.13	19.469		
7,500.0	7,084.7	7,499.3	7,084.7	16.9	17.8	-90.00	-267.2	393.3	625.9	592.7	33.23	18.839		
7,600.0	7,084.7	7,599.3	7,084.7	17.6	18.5	-90.00	-367.2	392.9	625.8	591.1	34.73	18.021		
7,700.0	7,084.7	7,699.3	7,084.7	18.6	19.3	-90.00	-467.2	392.5	625.7	589.2	36.58	17.108		
7,800.0	7,084.7	7,799.3	7,084.7	19.6	20.4	-90.00	-567.2	392.1	625.7	586.9	38.72	16.160		
7,900.0	7,084.7	7,899.3	7,084.7	20.8	21.5	-90.00	-667.2	391.7	625.6	584.5	41.11	15.218		
8,000.0	7,084.7	7,999.3	7,084.7	22.1	22.7	-90.00	-767.2	391.3	625.5	581.8	43.71	14.311		
8,100.0	7,084.7	8,099.3	7,084.7	23.5	24.1	-90.00	-867.2	390.9	625.4	578.9	46.48	13.456		
8,200.0	7,084.7	8,199.3	7,084.7	24.9	25.5	-90.00	-967.2	390.5	625.3	575.9	49.39	12.659		
8,300.0	7,084.7	8,299.3	7,084.7	26.4	27.0	-90.00	-1,067.2	390.1	625.2	572.8	52.43	11.925		
8,400.0	7,084.7	8,399.3	7,084.7	28.0	28.5	-90.00	-1,167.2	389.7	625.1	569.5	55.56	11.250		
8,500.0	7,084.7	8,499.3	7,084.7	29.6	30.1	-90.00	-1,267.2	389.3	625.0	566.2	58.78	10.632		
8,600.0	7,084.7	8,599.3	7,084.7	31.2	31.7	-90.00	-1,367.2	388.9	624.9	562.8	62.07	10.067		
8,700.0	7,084.7	8,699.3	7,084.7	32.9	33.3	-90.00	-1,467.2	388.5	624.8	559.4	65.43	9.550		
8,800.0	7,084.7	8,799.3	7,084.7	34.6	35.0	-90.00	-1,567.2	388.1	624.7	555.9	68.83	9.076		
8,900.0	7,084.7	8,899.3	7,084.7	36.3	36.7	-90.00	-1,667.2	387.7	624.6	552.3	72.28	8.642		
9,000.0	7,084.7	8,999.3	7,084.7	38.0	38.4	-90.00	-1,767.2	387.3	624.5	548.8	75.76	8.243		
9,100.0	7,084.7	9,099.3	7,084.7	39.8	40.2	-90.00	-1,867.2	386.9	624.4	545.2	79.28	7.876		
9,200.0	7,084.7	9,199.3	7,084.7	41.6	41.9	-90.00	-1,967.2	386.5	624.3	541.5	82.83	7.538		
9,300.0	7,084.7	9,299.3	7,084.7	43.3	43.7	-90.00	-2,067.2	386.1	624.2	537.8	86.40	7.225		
9,400.0	7,084.7	9,399.3	7,084.7	45.1	45.5	-90.00	-2,167.2	385.7	624.2	534.2	90.00	6.935		
9,500.0	7,084.7	9,499.3	7,084.7	46.9	47.2	-90.00	-2,267.2	385.3	624.1	530.4	93.61	6.666		
9,600.0	7,084.7	9,599.3	7,084.7	48.7	49.0	-90.00	-2,367.2	384.9	624.0	526.7	97.25	6.416		
9,700.0	7,084.7	9,699.3	7,084.7	50.6	50.9	-90.00	-2,467.2	384.5	623.9	523.0	100.89	6.183		
9,800.0	7,084.7	9,799.3	7,084.7	52.4	52.7	-90.00	-2,567.2	384.1	623.8	519.2	104.56	5.966		
9,900.0	7,084.7	9,899.3	7,084.7	54.2	54.5	-90.00	-2,667.2	383.7	623.7	515.5	108.23	5.762		
10,000.0	7,084.7	9,999.3	7,084.7	56.1	56.3	-90.00	-2,767.2	383.3	623.6	511.7	111.92	5.572		
10,100.0	7,084.7	10,099.3	7,084.7	57.9	58.2	-90.00	-2,867.1	382.9	623.5	507.9	115.62	5.393		
10,200.0	7,084.7	10,199.3	7,084.7	59.8	60.0	-90.00	-2,967.1	382.5	623.4	504.1	119.32	5.225		
10,300.0	7,084.7	10,299.3	7,084.7	61.6	61.9	-90.00	-3,067.1	382.1	623.3	500.3	123.04	5.066		

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

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Gustafson EF 31-377HN
<b>Project:</b>	SEC.31-T7N-R65W	<b>TVD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Reference Site:</b>	Gustafson Pad Sec.31-T7N-R65W	<b>MD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Gustafson EF 31-377HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (12-16-13)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Gustafson Pad Sec.31-T7N-R65W - Gustafson EF 31-374HN - Wellbore #1 - Plan #1 (12-16-13)												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	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	10,399.3	7,084.7	63.5	63.7	-90.00	-3,167.1	381.7	623.2	496.5	126.76	4.917	
10,500.0	7,084.7	10,499.3	7,084.7	65.3	65.6	-90.00	-3,267.1	381.3	623.1	492.6	130.49	4.775	
10,600.0	7,084.7	10,599.3	7,084.7	67.2	67.4	-90.00	-3,367.1	380.8	623.0	488.8	134.23	4.642	
10,700.0	7,084.7	10,699.3	7,084.7	69.1	69.3	-90.00	-3,467.1	380.4	622.9	485.0	137.97	4.515	
10,800.0	7,084.7	10,799.3	7,084.7	70.9	71.1	-90.00	-3,567.1	380.0	622.8	481.1	141.72	4.395	
10,900.0	7,084.7	10,899.3	7,084.7	72.8	73.0	-90.00	-3,667.1	379.6	622.8	477.3	145.47	4.281	
11,000.0	7,084.7	10,999.3	7,084.7	74.7	74.9	-90.00	-3,767.1	379.2	622.7	473.4	149.23	4.173	
11,100.0	7,084.7	11,099.3	7,084.7	76.6	76.8	-90.00	-3,867.1	378.8	622.6	469.6	152.99	4.069	
11,200.0	7,084.7	11,199.3	7,084.7	78.4	78.6	-90.00	-3,967.1	378.4	622.5	465.7	156.75	3.971	
11,300.0	7,084.7	11,299.3	7,084.7	80.3	80.5	-90.00	-4,067.1	378.0	622.4	461.9	160.52	3.877	
11,400.0	7,084.7	11,399.3	7,084.7	82.2	82.4	-90.00	-4,167.1	377.6	622.3	458.0	164.30	3.788	
11,500.0	7,084.7	11,499.3	7,084.7	84.1	84.3	-90.00	-4,267.1	377.2	622.2	454.1	168.07	3.702	
11,600.0	7,084.7	11,599.3	7,084.7	86.0	86.2	-90.00	-4,367.1	376.8	622.1	450.2	171.85	3.620	
11,700.0	7,084.7	11,699.3	7,084.7	87.9	88.1	-90.00	-4,467.1	376.4	622.0	446.4	175.63	3.541	
11,762.7	7,084.7	11,762.0	7,084.7	88.8	89.0	-90.00	-4,529.9	376.2	621.9	444.4	177.56	3.503	

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Gustafson EF 31-377HN
<b>Project:</b>	SEC.31-T7N-R65W	<b>TVD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Reference Site:</b>	Gustafson Pad Sec.31-T7N-R65W	<b>MD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Gustafson EF 31-377HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (12-16-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-89.98	0.0	-30.3	30.3					
100.0	100.0	100.0	100.0	0.1	0.1	-89.98	0.0	-30.3	30.3	30.1	0.22	134.792		
200.0	200.0	200.0	200.0	0.3	0.3	-89.98	0.0	-30.3	30.3	29.6	0.67	44.931		
300.0	300.0	300.0	300.0	0.6	0.6	-89.98	0.0	-30.3	30.3	29.2	1.12	26.958		
400.0	400.0	400.0	400.0	0.8	0.8	-89.98	0.0	-30.3	30.3	28.7	1.57	19.256		
500.0	500.0	500.0	500.0	1.0	1.0	-89.98	0.0	-30.3	30.3	28.3	2.02	14.977		
600.0	600.0	600.0	600.0	1.2	1.2	-89.98	0.0	-30.3	30.3	27.8	2.47	12.254		
700.0	700.0	700.0	700.0	1.5	1.5	-89.98	0.0	-30.3	30.3	27.4	2.92	10.369		
800.0	800.0	800.0	800.0	1.7	1.7	-89.98	0.0	-30.3	30.3	26.9	3.37	8.986		
900.0	900.0	900.0	900.0	1.9	1.9	-89.98	0.0	-30.3	30.3	26.5	3.82	7.929		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-89.98	0.0	-30.3	30.3	26.0	4.27	7.094		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-89.98	0.0	-30.3	30.3	25.6	4.72	6.419		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-89.98	0.0	-30.3	30.3	25.1	5.17	5.861		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-89.98	0.0	-30.3	30.3	24.7	5.62	5.392		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-89.98	0.0	-30.3	30.3	24.2	6.07	4.992		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-89.98	0.0	-30.3	30.3	23.8	6.52	4.648		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	-89.98	0.0	-30.3	30.3	23.3	6.97	4.348		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	-89.98	0.0	-30.3	30.3	22.9	7.42	4.085		
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-89.98	0.0	-30.3	30.3	22.4	7.87	3.851		
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	-89.98	0.0	-30.3	30.3	22.0	8.32	3.643		
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	-89.98	0.0	-30.3	30.3	21.5	8.77	3.456		
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	-89.98	0.0	-30.3	30.3	21.1	9.22	3.288		
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	-89.98	0.0	-30.3	30.3	20.6	9.66	3.135		
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	-89.98	0.0	-30.3	30.3	20.2	10.11	2.995		
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	-89.98	0.0	-30.3	30.3	19.7	10.56	2.868		
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	-89.98	0.0	-30.3	30.3	19.3	11.01	2.751		
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	-89.98	0.0	-30.3	30.3	18.8	11.46	2.643		
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	-89.98	0.0	-30.3	30.3	18.4	11.91	2.543		
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	-89.98	0.0	-30.3	30.3	17.9	12.36	2.451		
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	-89.98	0.0	-30.3	30.3	17.5	12.81	2.365		
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	-89.98	0.0	-30.3	30.3	17.0	13.26	2.285		
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	-89.98	0.0	-30.3	30.3	16.6	13.71	2.210		
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	-89.98	0.0	-30.3	30.3	16.1	14.16	2.140		
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	-89.98	0.0	-30.3	30.3	15.7	14.61	2.074		
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	-89.98	0.0	-30.3	30.3	15.2	15.06	2.012		
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	-89.98	0.0	-30.3	30.3	14.8	15.51	1.954		
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	-89.98	0.0	-30.3	30.3	14.3	15.96	1.898		
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	-89.98	0.0	-30.3	30.3	13.9	16.41	1.846		
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	-89.98	0.0	-30.3	30.3	13.4	16.86	1.797		
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	-89.98	0.0	-30.3	30.3	13.0	17.31	1.751		
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	-89.98	0.0	-30.3	30.3	12.5	17.76	1.706		
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	-89.98	0.0	-30.3	30.3	12.1	18.21	1.664		
4,200.0	4,200.0	4,200.0	4,200.0	9.3	9.3	-89.98	0.0	-30.3	30.3	11.6	18.66	1.624		
4,300.0	4,300.0	4,300.0	4,300.0	9.6	9.6	-89.98	0.0	-30.3	30.3	11.2	19.11	1.586		
4,400.0	4,400.0	4,400.0	4,400.0	9.8	9.8	-89.98	0.0	-30.3	30.3	10.7	19.55	1.549		
4,500.0	4,500.0	4,500.0	4,500.0	10.0	10.0	-89.98	0.0	-30.3	30.3	10.3	20.00	1.515		
4,600.0	4,600.0	4,600.0	4,600.0	10.2	10.2	-89.98	0.0	-30.3	30.3	9.8	20.45	1.481 Level 3		
4,700.0	4,700.0	4,700.0	4,700.0	10.5	10.5	-89.98	0.0	-30.3	30.3	9.4	20.90	1.449 Level 3		
4,800.0	4,800.0	4,800.0	4,800.0	10.7	10.7	-89.98	0.0	-30.3	30.3	8.9	21.35	1.419 Level 3		
4,900.0	4,900.0	4,900.0	4,900.0	10.9	10.9	-89.98	0.0	-30.3	30.3	8.5	21.80	1.390 Level 3		
5,000.0	5,000.0	5,000.0	5,000.0	11.1	11.1	-89.98	0.0	-30.3	30.3	8.0	22.25	1.362 Level 3		
5,100.0	5,100.0	5,100.0	5,100.0	11.4	11.4	-89.98	0.0	-30.3	30.3	7.6	22.70	1.335 Level 3		

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 31-378HC - Wellbore #1 - Plan #1 (12-16-13)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning	
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
5,200.0	5,200.0	5,200.0	5,200.0	11.6	11.6	-89.98	0.0	-30.3	30.3	7.1	23.15	1.309	Level 3	
5,300.0	5,300.0	5,300.0	5,300.0	11.8	11.8	-89.98	0.0	-30.3	30.3	6.7	23.60	1.284	Level 3	
5,400.0	5,400.0	5,400.0	5,400.0	12.0	12.0	-89.98	0.0	-30.3	30.3	6.2	24.05	1.260	Level 3	
5,500.0	5,500.0	5,500.0	5,500.0	12.2	12.2	-89.98	0.0	-30.3	30.3	5.8	24.50	1.237	Level 2, CC, ES, SF	
5,600.0	5,600.0	5,599.0	5,599.0	12.5	12.5	-88.13	1.0	-31.6	31.6	6.7	24.94	1.267	Level 3	
5,700.0	5,700.0	5,697.3	5,697.0	12.7	12.7	-82.01	5.2	-36.7	37.2	11.8	25.38	1.466	Level 3	
5,800.0	5,800.0	5,794.8	5,793.9	12.9	12.9	-53.45	12.4	-45.7	46.9	21.1	25.80	1.820		
5,900.0	5,899.5	5,891.9	5,889.6	13.1	13.1	-53.36	22.6	-58.5	56.9	30.7	26.16	2.173		
6,000.0	5,997.9	5,988.5	5,983.9	13.4	13.4	-57.30	35.8	-74.9	66.4	39.9	26.50	2.504		
6,100.0	6,094.3	6,084.7	6,076.5	13.6	13.6	-63.66	51.8	-95.0	76.3	49.4	26.90	2.835		
6,200.0	6,188.1	6,180.1	6,167.1	13.9	13.9	-71.34	70.7	-118.4	87.8	60.3	27.43	3.200		
6,300.0	6,278.6	6,274.9	6,255.4	14.2	14.2	-79.39	92.1	-145.2	102.1	74.0	28.12	3.631		
6,400.0	6,365.4	6,369.1	6,341.4	14.5	14.6	-87.07	116.1	-175.2	120.2	91.3	28.92	4.156		
6,500.0	6,451.7	6,463.3	6,425.4	15.0	15.0	-91.78	142.8	-208.4	142.1	112.3	29.78	4.771		
6,600.0	6,542.2	6,558.8	6,508.4	15.4	15.5	-77.65	172.3	-245.3	161.2	130.6	30.59	5.271		
6,700.0	6,638.4	6,655.1	6,591.3	15.7	16.1	-31.27	202.9	-283.5	172.2	141.3	30.89	5.574		
6,800.0	6,735.4	6,745.0	6,668.8	15.9	16.7	29.32	231.5	-319.1	181.7	150.9	30.83	5.894		
6,900.0	6,828.4	6,824.6	6,737.4	15.9	17.2	62.17	256.7	-350.7	201.2	170.3	30.90	6.511		
7,000.0	6,912.4	6,908.8	6,812.1	16.0	17.7	80.75	273.8	-385.2	237.0	205.9	31.07	7.628		
7,100.0	6,983.2	7,010.2	6,903.9	15.9	18.1	93.14	273.2	-427.5	284.0	253.0	31.04	9.151		
7,200.0	7,037.2	7,145.3	7,021.6	15.9	18.6	102.99	236.8	-481.9	334.7	304.2	30.56	10.955		
7,300.0	7,071.6	7,349.2	7,166.6	16.0	19.0	111.59	113.2	-549.0	378.7	349.0	29.64	12.778		
7,400.0	7,084.6	7,649.0	7,255.7	16.4	19.4	115.51	-163.9	-590.7	397.1	367.2	29.84	13.305		
7,444.8	7,085.3	7,693.7	7,255.7	16.6	19.5	115.44	-208.6	-590.8	396.6	366.4	30.19	13.138		
7,500.0	7,084.7	7,748.9	7,255.7	16.9	19.6	115.52	-263.8	-590.9	397.0	366.3	30.68	12.937		
7,600.0	7,084.7	7,848.9	7,255.7	17.6	20.1	115.52	-363.8	-591.1	396.9	364.9	31.99	12.405		
7,700.0	7,084.7	7,948.9	7,255.7	18.6	20.8	115.53	-463.8	-591.3	396.8	363.2	33.63	11.801		
7,800.0	7,084.7	8,048.9	7,255.7	19.6	21.7	115.53	-563.8	-591.6	396.8	361.2	35.53	11.166		
7,900.0	7,084.7	8,148.9	7,255.7	20.8	22.7	115.54	-663.8	-591.8	396.7	359.0	37.67	10.530		
8,000.0	7,084.7	8,248.9	7,255.7	22.1	23.9	115.54	-763.8	-592.0	396.6	356.6	40.01	9.913		
8,100.0	7,084.7	8,348.9	7,255.7	23.5	25.1	115.55	-863.8	-592.3	396.5	354.0	42.51	9.328		
8,200.0	7,084.7	8,448.9	7,255.7	24.9	26.4	115.55	-963.8	-592.5	396.5	351.3	45.15	8.781		
8,300.0	7,084.7	8,548.9	7,255.7	26.4	27.9	115.55	-1,063.8	-592.7	396.4	348.5	47.91	8.275		
8,400.0	7,084.7	8,648.9	7,255.7	28.0	29.3	115.56	-1,163.8	-593.0	396.3	345.6	50.75	7.809		
8,500.0	7,084.7	8,748.9	7,255.7	29.6	30.8	115.56	-1,263.8	-593.2	396.3	342.6	53.68	7.382		
8,600.0	7,084.7	8,848.9	7,255.7	31.2	32.4	115.57	-1,363.8	-593.4	396.2	339.5	56.68	6.990		
8,700.0	7,084.7	8,948.9	7,255.7	32.9	34.0	115.57	-1,463.8	-593.7	396.1	336.4	59.74	6.632		
8,800.0	7,084.7	9,048.9	7,255.7	34.6	35.6	115.58	-1,563.8	-593.9	396.1	333.2	62.84	6.303		
8,900.0	7,084.7	9,148.9	7,255.7	36.3	37.3	115.58	-1,663.8	-594.1	396.0	330.0	65.99	6.001		
9,000.0	7,084.7	9,248.9	7,255.7	38.0	39.0	115.59	-1,763.8	-594.4	395.9	326.8	69.17	5.724		
9,100.0	7,084.7	9,348.9	7,255.7	39.8	40.7	115.59	-1,863.8	-594.6	395.9	323.5	72.38	5.469		
9,200.0	7,084.7	9,448.9	7,255.7	41.6	42.4	115.60	-1,963.8	-594.8	395.8	320.2	75.62	5.234		
9,300.0	7,084.7	9,548.9	7,255.7	43.3	44.2	115.60	-2,063.8	-595.1	395.7	316.8	78.89	5.016		
9,400.0	7,084.7	9,648.9	7,255.7	45.1	45.9	115.61	-2,163.8	-595.3	395.7	313.5	82.17	4.815		
9,500.0	7,084.7	9,748.9	7,255.7	46.9	47.7	115.61	-2,263.8	-595.5	395.6	310.1	85.48	4.628		
9,600.0	7,084.7	9,848.9	7,255.7	48.7	49.5	115.62	-2,363.8	-595.8	395.5	306.7	88.80	4.454		
9,700.0	7,084.7	9,948.9	7,255.7	50.6	51.3	115.62	-2,463.8	-596.0	395.5	303.3	92.14	4.292		
9,800.0	7,084.7	10,048.9	7,255.7	52.4	53.1	115.63	-2,563.8	-596.2	395.4	299.9	95.49	4.141		
9,900.0	7,084.7	10,148.9	7,255.7	54.2	54.9	115.63	-2,663.8	-596.5	395.3	296.5	98.85	3.999		
10,000.0	7,084.7	10,248.9	7,255.7	56.1	56.7	115.63	-2,763.8	-596.7	395.3	293.0	102.22	3.867		
10,100.0	7,084.7	10,348.9	7,255.7	57.9	58.5	115.64	-2,863.8	-596.9	395.2	289.6	105.60	3.742		
10,200.0	7,084.7	10,448.9	7,255.7	59.8	60.3	115.64	-2,963.8	-597.2	395.1	286.1	108.99	3.625		

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Gustafson EF 31-377HN
<b>Project:</b>	SEC.31-T7N-R65W	<b>TVD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Reference Site:</b>	Gustafson Pad Sec.31-T7N-R65W	<b>MD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Gustafson EF 31-377HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (12-16-13)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Gustafson Pad Sec.31-T7N-R65W - Gustafson EF 31-378HC - Wellbore #1 - Plan #1 (12-16-13)												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	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	10,548.9	7,255.7	61.6	62.2	115.65	-3,063.8	-597.4	395.1	282.7	112.39	3.515	
10,400.0	7,084.7	10,648.9	7,255.7	63.5	64.0	115.65	-3,163.8	-597.6	395.0	279.2	115.80	3.411	
10,500.0	7,084.7	10,748.9	7,255.7	65.3	65.9	115.66	-3,263.8	-597.8	394.9	275.7	119.21	3.313	
10,600.0	7,084.7	10,848.9	7,255.7	67.2	67.7	115.66	-3,363.8	-598.1	394.8	272.2	122.63	3.220	
10,700.0	7,084.7	10,948.9	7,255.7	69.1	69.6	115.67	-3,463.8	-598.3	394.8	268.7	126.05	3.132	
10,800.0	7,084.7	11,048.9	7,255.7	70.9	71.4	115.67	-3,563.8	-598.5	394.7	265.2	129.48	3.048	
10,900.0	7,084.7	11,148.9	7,255.7	72.8	73.3	115.68	-3,663.8	-598.8	394.6	261.7	132.91	2.969	
11,000.0	7,084.7	11,248.9	7,255.7	74.7	75.1	115.68	-3,763.8	-599.0	394.6	258.2	136.35	2.894	
11,100.0	7,084.7	11,348.9	7,255.7	76.6	77.0	115.69	-3,863.8	-599.2	394.5	254.7	139.79	2.822	
11,200.0	7,084.7	11,448.9	7,255.7	78.4	78.9	115.69	-3,963.8	-599.5	394.4	251.2	143.24	2.754	
11,300.0	7,084.7	11,548.9	7,255.7	80.3	80.8	115.70	-4,063.8	-599.7	394.4	247.7	146.68	2.689	
11,400.0	7,084.7	11,648.9	7,255.7	82.2	82.6	115.70	-4,163.8	-599.9	394.3	244.2	150.13	2.626	
11,500.0	7,084.7	11,748.9	7,255.7	84.1	84.5	115.71	-4,263.8	-600.2	394.2	240.7	153.59	2.567	
11,600.0	7,084.7	11,848.9	7,255.7	86.0	86.4	115.71	-4,363.8	-600.4	394.2	237.1	157.05	2.510	
11,700.0	7,084.7	11,948.9	7,255.7	87.9	88.3	115.72	-4,463.8	-600.6	394.1	233.6	160.50	2.455	
11,744.7	7,084.7	11,993.6	7,255.7	88.6	89.1	115.72	-4,508.6	-600.7	394.1	232.2	161.90	2.434	
11,762.7	7,084.7	12,003.1	7,255.7	88.8	89.3	115.72	-4,518.1	-600.8	394.2	231.8	162.31	2.428	



<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Gustafson EF 31-377HN
<b>Project:</b>	SEC.31-T7N-R65W	<b>TVD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Reference Site:</b>	Gustafson Pad Sec.31-T7N-R65W	<b>MD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Gustafson EF 31-377HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (12-16-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 0-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.0	0.0	0.0	0.0	0.0	0.0	-88.95	1.1	-60.3	60.3				
100.0	100.0	100.0	100.0	0.1	0.1	-88.95	1.1	-60.3	60.3	60.1	0.22	268.393	
200.0	200.0	200.0	200.0	0.3	0.3	-88.95	1.1	-60.3	60.3	59.7	0.67	89.464	
300.0	300.0	300.0	300.0	0.6	0.6	-88.95	1.1	-60.3	60.3	59.2	1.12	53.679	
400.0	400.0	400.0	400.0	0.8	0.8	-88.95	1.1	-60.3	60.3	58.8	1.57	38.342	
500.0	500.0	500.0	500.0	1.0	1.0	-88.95	1.1	-60.3	60.3	58.3	2.02	29.821	
600.0	600.0	600.0	600.0	1.2	1.2	-88.95	1.1	-60.3	60.3	57.9	2.47	24.399	
700.0	700.0	700.0	700.0	1.5	1.5	-88.95	1.1	-60.3	60.3	57.4	2.92	20.646	
800.0	800.0	800.0	800.0	1.7	1.7	-88.95	1.1	-60.3	60.3	57.0	3.37	17.893	
900.0	900.0	900.0	900.0	1.9	1.9	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	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	-88.95	1.1	-60.3	60.3	38.1	22.25	2.711	
5,033.4	5,033.4	5,033.4	5,033.4	11.2	11.2	-88.95	1.1	-60.3	60.3	37.9	22.40	2.693 CC, ES	

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

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Gustafson EF 31-377HN
<b>Project:</b>	SEC.31-T7N-R65W	<b>TVD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Reference Site:</b>	Gustafson Pad Sec.31-T7N-R65W	<b>MD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Gustafson EF 31-377HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (12-16-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
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	5,098.6	5,098.6	11.4	11.3	-88.70	1.4	-60.9	60.9	38.2	22.69	2.684 SF		
5,200.0	5,200.0	5,195.6	5,195.4	11.6	11.5	-86.86	3.6	-65.3	65.5	42.4	23.12	2.834		
5,300.0	5,300.0	5,291.8	5,291.1	11.8	11.8	-83.88	7.9	-74.0	74.9	51.4	23.55	3.182		
5,400.0	5,400.0	5,386.8	5,385.0	12.0	12.0	-80.62	14.3	-86.8	89.3	65.3	23.97	3.723		
5,500.0	5,500.0	5,480.1	5,476.5	12.2	12.2	-77.65	22.7	-103.5	108.5	84.1	24.40	4.447		
5,600.0	5,600.0	5,571.4	5,564.9	12.5	12.4	-75.17	32.7	-123.6	132.6	107.7	24.82	5.341		
5,700.0	5,700.0	5,660.3	5,650.0	12.7	12.7	-73.21	44.3	-146.8	161.3	136.1	25.24	6.391		
5,800.0	5,800.0	5,746.9	5,731.5	12.9	13.0	-48.78	57.3	-172.8	193.7	168.1	25.62	7.562		
5,900.0	5,899.5	5,832.4	5,810.7	13.1	13.3	-47.92	71.7	-201.7	225.4	199.5	25.94	8.689		
6,000.0	5,997.9	5,916.9	5,887.4	13.4	13.6	-48.26	87.5	-233.3	255.9	229.7	26.21	9.765		
6,100.0	6,094.3	6,000.0	5,961.3	13.6	14.1	-49.36	104.5	-267.4	285.3	258.9	26.43	10.794		
6,200.0	6,188.1	6,084.8	6,035.0	13.9	14.5	-51.10	123.3	-305.0	313.9	287.2	26.68	11.767		
6,300.0	6,278.6	6,179.1	6,116.3	14.2	15.1	-53.81	144.6	-347.7	339.5	312.5	27.04	12.557		
6,400.0	6,365.4	6,272.9	6,197.2	14.5	15.8	-57.49	165.9	-390.2	362.4	334.7	27.71	13.078		
6,500.0	6,451.7	6,366.6	6,278.0	15.0	16.5	-61.35	187.1	-432.7	386.5	357.8	28.65	13.490		
6,600.0	6,542.2	6,462.2	6,360.3	15.4	17.2	-51.70	208.7	-476.0	411.9	382.2	29.71	13.863		
6,700.0	6,638.4	6,558.4	6,443.3	15.7	18.0	-14.06	230.5	-519.6	436.8	406.3	30.44	14.347		
6,800.0	6,735.4	6,650.3	6,522.5	15.9	18.7	35.83	251.3	-561.2	461.0	430.2	30.85	14.946		
6,900.0	6,828.4	6,733.3	6,594.1	15.9	19.5	58.58	270.1	-598.8	487.4	456.3	31.06	15.690		
7,000.0	6,912.4	6,820.4	6,670.1	16.0	20.1	69.40	283.9	-638.8	518.6	487.4	31.22	16.611		
7,100.0	6,983.2	6,928.0	6,764.9	15.9	20.8	76.32	277.7	-688.7	553.2	521.8	31.37	17.634		
7,200.0	7,037.2	7,071.7	6,884.1	15.9	21.5	82.25	229.5	-751.5	587.9	556.3	31.52	18.649		
7,300.0	7,071.6	7,281.4	7,019.3	16.0	22.1	87.88	88.8	-822.9	615.8	584.0	31.75	19.392		
7,400.0	7,084.6	7,548.3	7,084.7	16.4	22.4	90.00	-163.4	-857.8	625.5	592.6	32.86	19.035		
7,500.0	7,084.7	7,648.3	7,084.7	16.9	22.6	90.00	-263.4	-858.0	625.3	591.5	33.82	18.489		
7,600.0	7,084.7	7,748.3	7,084.7	17.6	22.9	90.00	-363.4	-858.2	625.2	589.9	35.28	17.720		
7,700.0	7,084.7	7,848.3	7,084.7	18.6	23.3	90.00	-463.4	-858.4	625.1	588.0	37.09	16.855		
7,800.0	7,084.7	7,948.3	7,084.7	19.6	24.0	90.00	-563.4	-858.6	625.0	585.8	39.19	15.949		
7,900.0	7,084.7	8,048.3	7,084.7	20.8	24.7	90.00	-663.4	-858.8	624.9	583.4	41.54	15.043		
8,000.0	7,084.7	8,148.3	7,084.7	22.1	25.7	90.00	-763.4	-859.0	624.8	580.7	44.10	14.167		
8,100.0	7,084.7	8,248.3	7,084.7	23.5	26.7	90.00	-863.4	-859.2	624.7	577.9	46.84	13.337		
8,200.0	7,084.7	8,348.3	7,084.7	24.9	27.9	90.00	-963.4	-859.4	624.6	574.9	49.72	12.561		
8,300.0	7,084.7	8,448.3	7,084.7	26.4	29.2	90.00	-1,063.4	-859.6	624.5	571.8	52.73	11.843		
8,400.0	7,084.7	8,548.3	7,084.7	28.0	30.6	90.00	-1,163.4	-859.8	624.4	568.5	55.84	11.181		
8,500.0	7,084.7	8,648.3	7,084.7	29.6	32.0	90.00	-1,263.4	-860.0	624.3	565.2	59.04	10.574		
8,600.0	7,084.7	8,748.3	7,084.7	31.2	33.5	90.00	-1,363.4	-860.2	624.2	561.9	62.31	10.017		
8,700.0	7,084.7	8,848.3	7,084.7	32.9	35.0	90.00	-1,463.4	-860.4	624.1	558.4	65.64	9.507		
8,800.0	7,084.7	8,948.3	7,084.7	34.6	36.6	90.00	-1,563.4	-860.6	624.0	554.9	69.03	9.039		
8,900.0	7,084.7	9,048.3	7,084.7	36.3	38.2	90.00	-1,663.4	-860.8	623.8	551.4	72.46	8.610		
9,000.0	7,084.7	9,148.3	7,084.7	38.0	39.9	90.00	-1,763.4	-861.0	623.7	547.8	75.93	8.214		
9,100.0	7,084.7	9,248.3	7,084.7	39.8	41.5	90.00	-1,863.4	-861.2	623.6	544.2	79.44	7.851		
9,200.0	7,084.7	9,348.3	7,084.7	41.6	43.2	90.00	-1,963.4	-861.4	623.5	540.6	82.97	7.515		
9,300.0	7,084.7	9,448.3	7,084.7	43.3	44.9	90.00	-2,063.4	-861.6	623.4	536.9	86.54	7.204		
9,400.0	7,084.7	9,548.3	7,084.7	45.1	46.7	90.00	-2,163.4	-861.8	623.3	533.2	90.12	6.916		
9,500.0	7,084.7	9,648.3	7,084.7	46.9	48.4	90.00	-2,263.4	-862.0	623.2	529.5	93.73	6.649		
9,600.0	7,084.7	9,748.3	7,084.7	48.7	50.2	90.00	-2,363.4	-862.2	623.1	525.7	97.35	6.400		
9,700.0	7,084.7	9,848.3	7,084.7	50.6	51.9	90.00	-2,463.4	-862.4	623.0	522.0	100.99	6.169		
9,800.0	7,084.7	9,948.3	7,084.7	52.4	53.7	90.00	-2,563.4	-862.6	622.9	518.2	104.65	5.952		
9,900.0	7,084.7	10,048.3	7,084.7	54.2	55.5	90.00	-2,663.4	-862.8	622.8	514.5	108.32	5.750		
10,000.0	7,084.7	10,148.3	7,084.7	56.1	57.3	90.00	-2,763.4	-863.0	622.7	510.7	112.00	5.560		
10,100.0	7,084.7	10,248.3	7,084.7	57.9	59.1	90.00	-2,863.4	-863.2	622.6	506.9	115.69	5.381		
10,200.0	7,084.7	10,348.3	7,084.7	59.8	60.9	90.00	-2,963.4	-863.4	622.5	503.1	119.39	5.214		

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

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Gustafson EF 31-377HN
<b>Project:</b>	SEC.31-T7N-R65W	<b>TVD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Reference Site:</b>	Gustafson Pad Sec.31-T7N-R65W	<b>MD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Gustafson EF 31-377HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (12-16-13)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b>												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	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	10,448.3	7,084.7	61.6	62.7	90.00	-3,063.4	-863.6	622.4	499.3	123.10	5.056	
10,400.0	7,084.7	10,548.3	7,084.7	63.5	64.5	90.00	-3,163.4	-863.8	622.2	495.4	126.82	4.907	
10,500.0	7,084.7	10,648.3	7,084.7	65.3	66.4	90.00	-3,263.4	-864.0	622.1	491.6	130.55	4.766	
10,600.0	7,084.7	10,748.3	7,084.7	67.2	68.2	90.00	-3,363.4	-864.2	622.0	487.8	134.28	4.632	
10,700.0	7,084.7	10,848.3	7,084.7	69.1	70.0	90.00	-3,463.4	-864.4	621.9	483.9	138.02	4.506	
10,800.0	7,084.7	10,948.3	7,084.7	70.9	71.9	90.00	-3,563.4	-864.6	621.8	480.1	141.76	4.386	
10,900.0	7,084.7	11,048.3	7,084.7	72.8	73.7	90.00	-3,663.4	-864.8	621.7	476.2	145.51	4.273	
11,000.0	7,084.7	11,148.3	7,084.7	74.7	75.6	90.00	-3,763.4	-865.0	621.6	472.3	149.26	4.165	
11,100.0	7,084.7	11,248.3	7,084.7	76.6	77.4	90.00	-3,863.4	-865.2	621.5	468.5	153.02	4.062	
11,200.0	7,084.7	11,348.3	7,084.7	78.4	79.3	90.00	-3,963.4	-865.4	621.4	464.6	156.79	3.963	
11,300.0	7,084.7	11,448.3	7,084.7	80.3	81.2	90.00	-4,063.4	-865.6	621.3	460.7	160.55	3.870	
11,400.0	7,084.7	11,548.3	7,084.7	82.2	83.0	90.00	-4,163.4	-865.8	621.2	456.9	164.32	3.780	
11,500.0	7,084.7	11,648.3	7,084.7	84.1	84.9	90.00	-4,263.4	-866.0	621.1	453.0	168.10	3.695	
11,600.0	7,084.7	11,748.3	7,084.7	86.0	86.8	90.00	-4,363.4	-866.2	621.0	449.1	171.87	3.613	
11,700.0	7,084.7	11,848.3	7,084.7	87.9	88.6	90.00	-4,463.4	-866.4	620.9	445.2	175.65	3.535	
11,742.0	7,084.7	11,890.4	7,084.7	88.5	89.4	90.00	-4,505.4	-866.5	620.8	443.7	177.09	3.506	
11,762.7	7,084.7	11,895.7	7,084.7	88.8	89.6	90.00	-4,510.7	-866.5	621.0	443.5	177.51	3.498	

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Gustafson EF 31-377HN
<b>Project:</b>	SEC.31-T7N-R65W	<b>TVD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Reference Site:</b>	Gustafson Pad Sec.31-T7N-R65W	<b>MD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Gustafson EF 31-377HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (12-16-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-88.61	2.2	-90.3	90.4					
100.0	100.0	100.0	100.0	0.1	0.1	-88.61	2.2	-90.3	90.4	90.1	0.22	402.022		
200.0	200.0	200.0	200.0	0.3	0.3	-88.61	2.2	-90.3	90.4	89.7	0.67	134.007		
300.0	300.0	300.0	300.0	0.6	0.6	-88.61	2.2	-90.3	90.4	89.2	1.12	80.404		
400.0	400.0	400.0	400.0	0.8	0.8	-88.61	2.2	-90.3	90.4	88.8	1.57	57.432		
500.0	500.0	500.0	500.0	1.0	1.0	-88.61	2.2	-90.3	90.4	88.3	2.02	44.669		
600.0	600.0	600.0	600.0	1.2	1.2	-88.61	2.2	-90.3	90.4	87.9	2.47	36.547		
700.0	700.0	700.0	700.0	1.5	1.5	-88.61	2.2	-90.3	90.4	87.4	2.92	30.925		
800.0	800.0	800.0	800.0	1.7	1.7	-88.61	2.2	-90.3	90.4	87.0	3.37	26.801		
900.0	900.0	900.0	900.0	1.9	1.9	-88.61	2.2	-90.3	90.4	86.5	3.82	23.648		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-88.61	2.2	-90.3	90.4	86.1	4.27	21.159		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-88.61	2.2	-90.3	90.4	85.6	4.72	19.144		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-88.61	2.2	-90.3	90.4	85.2	5.17	17.479		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-88.61	2.2	-90.3	90.4	84.7	5.62	16.081		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-88.61	2.2	-90.3	90.4	84.3	6.07	14.890		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-88.61	2.2	-90.3	90.4	83.8	6.52	13.863		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	-88.61	2.2	-90.3	90.4	83.4	6.97	12.968		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	-88.61	2.2	-90.3	90.4	82.9	7.42	12.182		
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-88.61	2.2	-90.3	90.4	82.5	7.87	11.486		
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	-88.61	2.2	-90.3	90.4	82.0	8.32	10.865		
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	-88.61	2.2	-90.3	90.4	81.6	8.77	10.308		
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	-88.61	2.2	-90.3	90.4	81.1	9.22	9.805		
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	-88.61	2.2	-90.3	90.4	80.7	9.66	9.349		
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	-88.61	2.2	-90.3	90.4	80.2	10.11	8.934		
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	-88.61	2.2	-90.3	90.4	79.8	10.56	8.554		
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	-88.61	2.2	-90.3	90.4	79.3	11.01	8.205		
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	-88.61	2.2	-90.3	90.4	78.9	11.46	7.883		
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	-88.61	2.2	-90.3	90.4	78.4	11.91	7.585		
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	-88.61	2.2	-90.3	90.4	78.0	12.36	7.309		
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	-88.61	2.2	-90.3	90.4	77.5	12.81	7.053		
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	-88.61	2.2	-90.3	90.4	77.1	13.26	6.814		
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	-88.61	2.2	-90.3	90.4	76.7	13.71	6.591		
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	-88.61	2.2	-90.3	90.4	76.2	14.16	6.381		
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	-88.61	2.2	-90.3	90.4	75.8	14.61	6.185		
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	-88.61	2.2	-90.3	90.4	75.3	15.06	6.000		
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	-88.61	2.2	-90.3	90.4	74.9	15.51	5.826		
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	-88.61	2.2	-90.3	90.4	74.4	15.96	5.662		
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	-88.61	2.2	-90.3	90.4	74.0	16.41	5.507		
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	-88.61	2.2	-90.3	90.4	73.5	16.86	5.360		
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	-88.61	2.2	-90.3	90.4	73.1	17.31	5.221		
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	-88.61	2.2	-90.3	90.4	72.6	17.76	5.089		
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	-88.61	2.2	-90.3	90.4	72.2	18.21	4.963		
4,200.0	4,200.0	4,200.0	4,200.0	9.3	9.3	-88.61	2.2	-90.3	90.4	71.7	18.66	4.844		
4,300.0	4,300.0	4,300.0	4,300.0	9.6	9.6	-88.61	2.2	-90.3	90.4	71.3	19.11	4.730		
4,400.0	4,400.0	4,400.0	4,400.0	9.8	9.8	-88.61	2.2	-90.3	90.4	70.8	19.55	4.621 CC, ES, SF		
4,500.0	4,500.0	4,495.6	4,495.5	10.0	10.0	-88.22	2.9	-92.6	92.8	72.8	19.98	4.643		
4,600.0	4,600.0	4,590.6	4,590.3	10.2	10.2	-87.19	4.9	-99.4	100.0	79.6	20.41	4.903		
4,700.0	4,700.0	4,684.8	4,683.7	10.5	10.4	-85.76	8.2	-110.7	112.1	91.3	20.83	5.385		
4,800.0	4,800.0	4,777.5	4,775.1	10.7	10.6	-84.23	12.7	-126.0	129.1	107.8	21.24	6.076		
4,900.0	4,900.0	4,868.5	4,863.8	10.9	10.8	-82.77	18.4	-145.2	150.7	129.1	21.66	6.958		
5,000.0	5,000.0	4,957.4	4,949.5	11.1	11.1	-81.50	25.1	-167.8	177.0	154.9	22.08	8.017		
5,100.0	5,100.0	5,043.9	5,031.7	11.4	11.4	-80.41	32.7	-193.4	207.7	185.2	22.49	9.234		

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

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Gustafson EF 31-377HN
<b>Project:</b>	SEC.31-T7N-R65W	<b>TVD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Reference Site:</b>	Gustafson Pad Sec.31-T7N-R65W	<b>MD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Gustafson EF 31-377HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (12-16-13)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,200.0	5,200.0	5,127.7	5,110.2	11.6	11.7	-79.52	41.0	-221.7	242.7	219.8	22.91	10.592		
5,300.0	5,300.0	5,208.6	5,184.7	11.8	12.0	-78.78	50.0	-252.1	281.7	258.3	23.33	12.075		
5,400.0	5,400.0	5,286.6	5,255.1	12.0	12.4	-78.18	59.5	-284.2	324.5	300.7	23.74	13.666		
5,500.0	5,500.0	5,361.5	5,321.4	12.2	12.8	-77.68	69.4	-317.6	370.9	346.7	24.16	15.349		
5,600.0	5,600.0	5,434.6	5,384.8	12.5	13.2	-77.26	79.7	-352.6	420.7	396.1	24.59	17.109		
5,700.0	5,700.0	5,520.5	5,458.5	12.7	13.8	-76.86	92.2	-394.8	471.9	446.8	25.06	18.833		
5,800.0	5,800.0	5,606.8	5,532.6	12.9	14.4	-52.94	104.7	-437.2	522.4	497.1	25.24	20.693		
5,900.0	5,899.5	5,695.2	5,608.5	13.1	15.1	-51.44	117.6	-480.6	568.8	543.1	25.63	22.190		
6,000.0	5,997.9	5,785.4	5,686.0	13.4	15.9	-50.84	130.7	-524.9	610.4	584.4	25.97	23.500		
6,100.0	6,094.3	5,876.7	5,764.4	13.6	16.7	-50.96	143.9	-569.8	647.3	621.0	26.28	24.629		
6,200.0	6,188.1	5,968.4	5,843.1	13.9	17.5	-51.68	157.2	-614.9	679.7	653.1	26.59	25.566		
6,300.0	6,278.6	6,059.7	5,921.5	14.2	18.3	-52.90	170.5	-659.8	708.0	681.0	26.94	26.285		
6,400.0	6,365.4	6,150.3	5,999.3	14.5	19.2	-54.97	183.7	-704.2	733.2	705.7	27.52	26.640		
6,500.0	6,451.7	6,240.6	6,076.9	15.0	20.1	-57.50	196.8	-748.7	759.3	731.0	28.35	26.781		
6,600.0	6,542.2	6,333.6	6,156.7	15.4	21.0	-47.95	210.3	-794.4	787.5	758.0	29.49	26.704		
6,700.0	6,638.4	6,429.1	6,238.7	15.7	21.9	-12.18	224.2	-841.3	816.6	786.1	30.46	26.806		
6,800.0	6,735.4	6,522.1	6,318.6	15.9	22.9	34.90	237.7	-887.0	844.9	813.8	31.14	27.131		
6,900.0	6,828.4	6,608.0	6,392.3	15.9	23.7	54.83	250.2	-929.2	872.8	841.3	31.50	27.707		
7,000.0	6,912.4	6,682.2	6,456.1	16.0	24.5	62.64	260.9	-965.7	901.5	869.9	31.63	28.503		
7,100.0	6,983.2	6,741.0	6,506.6	15.9	25.1	65.59	269.5	-994.6	932.8	901.2	31.61	29.508		
7,200.0	7,037.2	6,781.4	6,541.3	15.9	25.5	65.34	275.4	-1,014.4	967.9	936.5	31.41	30.809		
7,300.0	7,071.6	6,801.3	6,558.4	16.0	25.8	62.29	278.2	-1,024.2	1,007.0	976.1	30.86	32.633		
7,400.0	7,084.6	6,799.7	6,557.0	16.4	25.7	56.86	278.0	-1,023.4	1,048.9	1,019.1	29.80	35.192		
7,500.0	7,084.7	7,780.8	7,084.7	16.9	30.3	90.00	-262.4	-1,326.6	1,094.0	1,059.3	34.70	31.530		
7,600.0	7,084.7	7,880.8	7,084.7	17.6	30.5	90.00	-362.4	-1,326.8	1,093.9	1,057.7	36.13	30.273		
7,700.0	7,084.7	7,980.8	7,084.7	18.6	30.7	90.00	-462.4	-1,327.0	1,093.8	1,055.9	37.91	28.853		
7,800.0	7,084.7	8,080.8	7,084.7	19.6	31.1	90.00	-562.4	-1,327.2	1,093.7	1,053.7	39.97	27.359		
7,900.0	7,084.7	8,180.8	7,084.7	20.8	31.5	90.00	-662.4	-1,327.4	1,093.6	1,051.3	42.29	25.859		
8,000.0	7,084.7	8,280.8	7,084.7	22.1	32.0	90.00	-762.4	-1,327.6	1,093.5	1,048.6	44.82	24.399		
8,100.0	7,084.7	8,380.8	7,084.7	23.5	32.7	90.00	-862.4	-1,327.9	1,093.4	1,045.8	47.52	23.008		
8,200.0	7,084.7	8,480.8	7,084.7	24.9	33.5	90.00	-962.4	-1,328.1	1,093.3	1,042.9	50.37	21.703		
8,300.0	7,084.7	8,580.8	7,084.7	26.4	34.3	90.00	-1,062.4	-1,328.3	1,093.2	1,039.8	53.35	20.490		
8,400.0	7,084.7	8,680.8	7,084.7	28.0	35.3	90.00	-1,162.4	-1,328.5	1,093.0	1,036.6	56.43	19.370		
8,500.0	7,084.7	8,780.8	7,084.7	29.6	36.4	90.00	-1,262.4	-1,328.7	1,092.9	1,033.3	59.60	18.337		
8,600.0	7,084.7	8,880.8	7,084.7	31.2	37.6	90.00	-1,362.4	-1,328.9	1,092.8	1,030.0	62.85	17.389		
8,700.0	7,084.7	8,980.8	7,084.7	32.9	38.9	90.00	-1,462.4	-1,329.1	1,092.7	1,026.6	66.16	16.517		
8,800.0	7,084.7	9,080.8	7,084.7	34.6	40.2	90.00	-1,562.4	-1,329.3	1,092.6	1,023.1	69.52	15.716		
8,900.0	7,084.7	9,180.8	7,084.7	36.3	41.6	90.00	-1,662.4	-1,329.5	1,092.5	1,019.6	72.94	14.979		
9,000.0	7,084.7	9,280.8	7,084.7	38.0	43.0	90.00	-1,762.4	-1,329.7	1,092.4	1,016.0	76.39	14.301		
9,100.0	7,084.7	9,380.8	7,084.7	39.8	44.5	90.00	-1,862.4	-1,329.9	1,092.3	1,012.4	79.88	13.675		
9,200.0	7,084.7	9,480.8	7,084.7	41.6	46.1	90.00	-1,962.4	-1,330.1	1,092.2	1,008.8	83.40	13.096		
9,300.0	7,084.7	9,580.8	7,084.7	43.3	47.6	90.00	-2,062.4	-1,330.3	1,092.1	1,005.2	86.95	12.560		
9,400.0	7,084.7	9,680.8	7,084.7	45.1	49.2	90.00	-2,162.4	-1,330.5	1,092.0	1,001.5	90.52	12.064		
9,500.0	7,084.7	9,780.8	7,084.7	46.9	50.9	90.00	-2,262.4	-1,330.7	1,091.9	997.8	94.11	11.602		
9,600.0	7,084.7	9,880.8	7,084.7	48.7	52.5	90.00	-2,362.4	-1,330.9	1,091.8	994.1	97.73	11.172		
9,700.0	7,084.7	9,980.8	7,084.7	50.6	54.2	90.00	-2,462.4	-1,331.1	1,091.7	990.3	101.36	10.771		
9,800.0	7,084.7	10,080.8	7,084.7	52.4	55.9	90.00	-2,562.4	-1,331.3	1,091.6	986.6	105.00	10.396		
9,900.0	7,084.7	10,180.8	7,084.7	54.2	57.6	90.00	-2,662.4	-1,331.5	1,091.5	982.8	108.66	10.045		
10,000.0	7,084.7	10,280.8	7,084.7	56.1	59.3	90.00	-2,762.4	-1,331.7	1,091.4	979.0	112.33	9.715		
10,100.0	7,084.7	10,380.8	7,084.7	57.9	61.1	90.00	-2,862.4	-1,331.9	1,091.3	975.3	116.02	9.406		
10,200.0	7,084.7	10,480.8	7,084.7	59.8	62.8	90.00	-2,962.4	-1,332.1	1,091.2	971.5	119.71	9.115		
10,300.0	7,084.7	10,580.8	7,084.7	61.6	64.6	90.00	-3,062.4	-1,332.3	1,091.1	967.6	123.41	8.841		

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

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Gustafson EF 31-377HN
<b>Project:</b>	SEC.31-T7N-R65W	<b>TVD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Reference Site:</b>	Gustafson Pad Sec.31-T7N-R65W	<b>MD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Gustafson EF 31-377HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (12-16-13)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Gustafson Pad Sec.31-T7N-R65W - Gustafson EF 31-380HN - Wellbore #1 - Plan #1 (12-16-13)												<b>Offset Site Error:</b>	0.0 ft
Survey Program: 0-MWD												<b>Offset Well Error:</b>	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	10,680.8	7,084.7	63.5	66.3	90.00	-3,162.4	-1,332.5	1,091.0	963.8	127.12	8.582	
10,500.0	7,084.7	10,780.8	7,084.7	65.3	68.1	90.00	-3,262.4	-1,332.7	1,090.9	960.0	130.84	8.337	
10,600.0	7,084.7	10,880.8	7,084.7	67.2	69.9	90.00	-3,362.4	-1,332.9	1,090.7	956.2	134.57	8.105	
10,700.0	7,084.7	10,980.8	7,084.7	69.1	71.7	90.00	-3,462.4	-1,333.1	1,090.6	952.3	138.30	7.886	
10,800.0	7,084.7	11,080.8	7,084.7	70.9	73.5	90.00	-3,562.4	-1,333.3	1,090.5	948.5	142.04	7.678	
10,900.0	7,084.7	11,180.8	7,084.7	72.8	75.3	90.00	-3,662.4	-1,333.5	1,090.4	944.6	145.78	7.480	
11,000.0	7,084.7	11,280.8	7,084.7	74.7	77.1	90.00	-3,762.4	-1,333.7	1,090.3	940.8	149.53	7.292	
11,100.0	7,084.7	11,380.8	7,084.7	76.6	78.9	90.00	-3,862.4	-1,333.9	1,090.2	936.9	153.29	7.112	
11,200.0	7,084.7	11,480.8	7,084.7	78.4	80.7	90.00	-3,962.4	-1,334.1	1,090.1	933.1	157.05	6.941	
11,300.0	7,084.7	11,580.8	7,084.7	80.3	82.6	90.00	-4,062.4	-1,334.3	1,090.0	929.2	160.81	6.778	
11,400.0	7,084.7	11,680.8	7,084.7	82.2	84.4	90.00	-4,162.4	-1,334.5	1,089.9	925.3	164.57	6.623	
11,500.0	7,084.7	11,780.8	7,084.7	84.1	86.2	90.00	-4,262.4	-1,334.7	1,089.8	921.5	168.34	6.474	
11,600.0	7,084.7	11,880.8	7,084.7	86.0	88.1	90.00	-4,362.4	-1,335.0	1,089.7	917.6	172.12	6.331	
11,700.0	7,084.7	11,980.8	7,084.7	87.9	89.9	90.00	-4,462.4	-1,335.2	1,089.6	913.7	175.89	6.195	
11,734.4	7,084.7	12,015.1	7,084.7	88.4	90.6	90.00	-4,496.8	-1,335.2	1,089.6	912.5	177.07	6.153	
11,762.7	7,084.7	12,016.5	7,084.7	88.8	90.6	90.00	-4,498.2	-1,335.2	1,089.9	912.3	177.53	6.139	

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Gustafson EF 31-377HN
<b>Project:</b>	SEC.31-T7N-R65W	<b>TVD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Reference Site:</b>	Gustafson Pad Sec.31-T7N-R65W	<b>MD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Gustafson EF 31-377HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (12-16-13)	<b>Offset TVD Reference:</b>	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 31-377HN  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.51°





<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Gustafson EF 31-377HN
<b>Project:</b>	SEC.31-T7N-R65W	<b>TVD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Reference Site:</b>	Gustafson Pad Sec.31-T7N-R65W	<b>MD Reference:</b>	WELL @ 4844.7ft (RKB - 16.5)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Gustafson EF 31-377HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (12-16-13)	<b>Offset TVD Reference:</b>	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 31-377HN

Coordinate System is US State Plane 1983, Colorado Northern Zone

Grid Convergence at Surface is: 0.51°

