

# Great Western

Well Name: **Bruegman South EG 34-024HN**

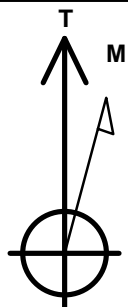
Surface Location: Bruegman Pad Sec.34-T7N-R64W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4844.8

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1434992.76	3265704.73	40.523525	-104.544219	
RKB - 16.5' WELL @ 4861.3ft (RKB - 16.5')						

## WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Shape
SHL 385'FSL & 414'FWL	1.0	0.0	0.0	Point
BHL 470'FNL & 1040'FWL	6957.3	4424.3	592.1	Point
Entry Pt. 460'FSL & 1036'FWL	6957.3	76.9	621.6	Point



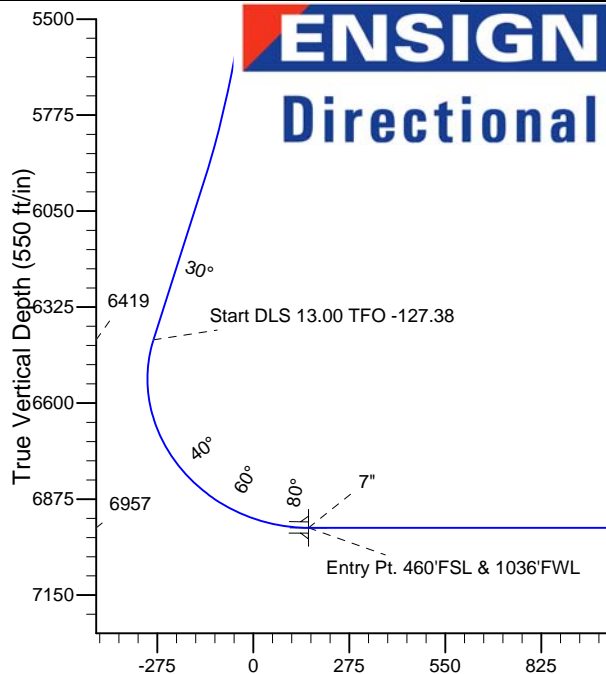
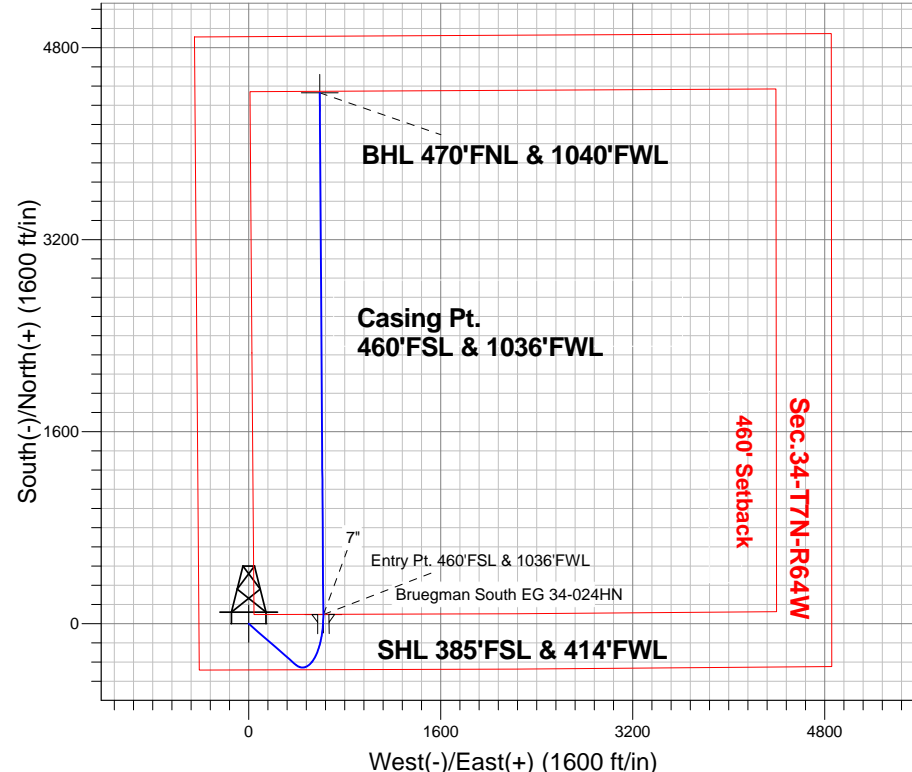
Azimuths to True North  
Magnetic North: 8.43°

Magnetic Field  
Strength: 52967.8snT  
Dip Angle: 67.10°  
Date: 11/1/2013  
Model: IGRF2010

Bruegman Pad Sec.34-T7N-R64W  
Bruegman South EG 34-024HN  
Plan #1 (11-1-13)  
15:38, November 12 2013

## ANNOTATIONS

TVD	MD	Annotation
5010.0	5010.0	KOP - Start Build 3.00
6419.0	6534.5	Start DLS 13.00 TFO -127.38
6957.3	11723.2	TD at 11723.2



## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	5010.0	0.00	0.00	5010.0	0.0	0.0	0.00	0.00	0.0	
3	6011.4	30.04	131.05	5966.1	-168.5	193.5	3.00	131.05	-141.4	
4	6534.5	30.04	131.05	6419.0	-340.5	391.0	0.00	0.00	-285.6	
5	7375.6	90.00	359.62	6957.3	76.9	621.6	13.00	-127.38	158.7	Entry Pt. 460'FSL & 1036'FWL
6	7376.6	90.00	359.61	6957.3	77.9	621.6	1.00	-90.00	159.6	
7	11723.2	90.00	359.61	6957.3	4424.3	592.1	0.00	0.00	4463.8	BHL 470'FNL & 1040'FWL

Vertical Section at 7.62° (550 ft/in)



## **Great Western**

**SEC.34-T7N-R64W**

**Bruegman Pad Sec.34-T7N-R64W**

**Bruegman South EG 34-024HN**

**Wellbore #1**

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

## **Standard Planning Report**

**12 November, 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	
5,010.0	0.00	0.00	5,010.0	0.0	0.0	0.00	0.00	0.00	0.00	
6,011.4	30.04	131.05	5,966.1	-168.5	193.5	3.00	3.00	0.00	131.05	
6,534.5	30.04	131.05	6,419.0	-340.5	391.0	0.00	0.00	0.00	0.00	
7,375.6	90.00	359.62	6,957.3	76.9	621.6	13.00	7.13	-15.63	-127.38	Entry Pt. 460'FSL &
7,376.6	90.00	359.61	6,957.3	77.9	621.6	1.00	0.00	-1.00	-90.00	
11,723.2	90.00	359.61	6,957.3	4,424.3	592.1	0.00	0.00	0.00	0.00	BHL 470'FNL & 104'

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Bruegman South EG 34-024HN
<b>Company:</b>	Great Western	<b>TVD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Project:</b>	SEC.34-T7N-R64W	<b>MD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Site:</b>	Bruegman Pad Sec.34-T7N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Bruegman South EG 34-024HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (11-1-13)		

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 385'FSL & 414'FWL									
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,800.0	0.00	0.00	2,800.0	0.0	0.0	0.0	0.00	0.00	0.00
2,900.0	0.00	0.00	2,900.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,100.0	0.00	0.00	3,100.0	0.0	0.0	0.0	0.00	0.00	0.00
3,200.0	0.00	0.00	3,200.0	0.0	0.0	0.0	0.00	0.00	0.00
3,300.0	0.00	0.00	3,300.0	0.0	0.0	0.0	0.00	0.00	0.00
3,400.0	0.00	0.00	3,400.0	0.0	0.0	0.0	0.00	0.00	0.00
3,500.0	0.00	0.00	3,500.0	0.0	0.0	0.0	0.00	0.00	0.00
3,600.0	0.00	0.00	3,600.0	0.0	0.0	0.0	0.00	0.00	0.00
3,700.0	0.00	0.00	3,700.0	0.0	0.0	0.0	0.00	0.00	0.00
3,800.0	0.00	0.00	3,800.0	0.0	0.0	0.0	0.00	0.00	0.00
3,900.0	0.00	0.00	3,900.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,100.0	0.00	0.00	4,100.0	0.0	0.0	0.0	0.00	0.00	0.00
4,200.0	0.00	0.00	4,200.0	0.0	0.0	0.0	0.00	0.00	0.00
4,300.0	0.00	0.00	4,300.0	0.0	0.0	0.0	0.00	0.00	0.00
4,400.0	0.00	0.00	4,400.0	0.0	0.0	0.0	0.00	0.00	0.00
4,500.0	0.00	0.00	4,500.0	0.0	0.0	0.0	0.00	0.00	0.00
4,600.0	0.00	0.00	4,600.0	0.0	0.0	0.0	0.00	0.00	0.00
4,700.0	0.00	0.00	4,700.0	0.0	0.0	0.0	0.00	0.00	0.00
4,800.0	0.00	0.00	4,800.0	0.0	0.0	0.0	0.00	0.00	0.00
4,900.0	0.00	0.00	4,900.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,010.0	0.00	0.00	5,010.0	0.0	0.0	0.0	0.00	0.00	0.00

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<b>Site:</b>	Bruegman Pad Sec.34-T7N-R64W	<b>North Reference:</b>	True
<b>Well:</b>	Bruegman South EG 34-024HN	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (11-1-13)		

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)
<b>KOP - Start Build 3.00</b>									
5,100.0	2.70	131.05	5,100.0	-1.4	1.6	-1.2	3.00	3.00	0.00
5,200.0	5.70	131.05	5,199.7	-6.2	7.1	-5.2	3.00	3.00	0.00
5,300.0	8.70	131.05	5,298.9	-14.4	16.6	-12.1	3.00	3.00	0.00
5,400.0	11.70	131.05	5,397.3	-26.1	29.9	-21.9	3.00	3.00	0.00
5,500.0	14.70	131.05	5,494.6	-41.1	47.1	-34.4	3.00	3.00	0.00
5,600.0	17.70	131.05	5,590.7	-59.4	68.2	-49.8	3.00	3.00	0.00
5,700.0	20.70	131.05	5,685.1	-81.0	93.0	-67.9	3.00	3.00	0.00
5,800.0	23.70	131.05	5,777.7	-105.8	121.5	-88.7	3.00	3.00	0.00
5,900.0	26.70	131.05	5,868.1	-133.7	153.6	-112.2	3.00	3.00	0.00
6,000.0	29.70	131.05	5,956.3	-164.8	189.2	-138.2	3.00	3.00	0.00
6,011.4	30.04	131.05	5,966.1	-168.5	193.5	-141.4	3.00	3.00	0.00
6,100.0	30.04	131.05	6,042.8	-197.6	226.9	-165.8	0.00	0.00	0.00
6,200.0	30.04	131.05	6,129.4	-230.5	264.7	-193.4	0.00	0.00	0.00
6,300.0	30.04	131.05	6,216.0	-263.4	302.4	-220.9	0.00	0.00	0.00
6,400.0	30.04	131.05	6,302.5	-296.3	340.2	-248.5	0.00	0.00	0.00
6,500.0	30.04	131.05	6,389.1	-329.1	378.0	-276.1	0.00	0.00	0.00
6,534.5	30.04	131.05	6,419.0	-340.5	391.0	-285.6	0.00	0.00	0.00
<b>Start DLS 13.00 TFO -127.38</b>									
6,600.0	25.70	115.31	6,476.9	-357.4	416.2	-299.0	13.00	-6.64	-24.03
6,700.0	23.54	84.19	6,568.2	-364.6	455.9	-301.0	13.00	-2.16	-31.12
6,800.0	27.69	55.35	6,658.7	-349.3	495.0	-280.6	13.00	4.15	-28.84
6,900.0	36.02	36.23	6,743.8	-312.3	531.6	-239.0	13.00	8.33	-19.12
7,000.0	46.32	24.08	6,819.1	-255.3	563.9	-178.2	13.00	10.30	-12.15
7,100.0	57.51	15.65	6,880.8	-181.3	590.2	-101.5	13.00	11.20	-8.44
7,200.0	69.14	9.13	6,925.6	-94.2	609.0	-12.6	13.00	11.63	-6.52
7,300.0	80.98	3.56	6,951.4	1.6	619.6	83.8	13.00	11.84	-5.56
7,375.6	89.99	359.62	6,957.3	76.9	621.6	158.7	12.99	11.91	-5.21
<b>7" - Entry Pt. 460'FSL &amp; 1036'FWL</b>									
7,376.6	90.00	359.61	6,957.3	77.9	621.6	159.6	1.35	0.55	-1.24
7,400.0	90.00	359.61	6,957.3	101.2	621.5	182.8	0.00	0.00	0.00
7,500.0	90.00	359.61	6,957.3	201.2	620.8	281.8	0.00	0.00	0.00
7,600.0	90.00	359.61	6,957.3	301.2	620.1	380.8	0.00	0.00	0.00
7,700.0	90.00	359.61	6,957.3	401.2	619.4	479.9	0.00	0.00	0.00
7,800.0	90.00	359.61	6,957.3	501.2	618.7	578.9	0.00	0.00	0.00
7,900.0	90.00	359.61	6,957.3	601.2	618.1	677.9	0.00	0.00	0.00
8,000.0	90.00	359.61	6,957.3	701.2	617.4	776.9	0.00	0.00	0.00
8,100.0	90.00	359.61	6,957.3	801.2	616.7	875.9	0.00	0.00	0.00
8,200.0	90.00	359.61	6,957.3	901.2	616.0	975.0	0.00	0.00	0.00
8,300.0	90.00	359.61	6,957.3	1,001.2	615.3	1,074.0	0.00	0.00	0.00
8,400.0	90.00	359.61	6,957.3	1,101.2	614.7	1,173.0	0.00	0.00	0.00
8,500.0	90.00	359.61	6,957.3	1,201.2	614.0	1,272.0	0.00	0.00	0.00
8,600.0	90.00	359.61	6,957.3	1,301.2	613.3	1,371.1	0.00	0.00	0.00
8,700.0	90.00	359.61	6,957.3	1,401.2	612.6	1,470.1	0.00	0.00	0.00
8,800.0	90.00	359.61	6,957.3	1,501.2	611.9	1,569.1	0.00	0.00	0.00
8,900.0	90.00	359.61	6,957.3	1,601.2	611.3	1,668.1	0.00	0.00	0.00
9,000.0	90.00	359.61	6,957.3	1,701.2	610.6	1,767.2	0.00	0.00	0.00
9,100.0	90.00	359.61	6,957.3	1,801.2	609.9	1,866.2	0.00	0.00	0.00
9,200.0	90.00	359.61	6,957.3	1,901.2	609.2	1,965.2	0.00	0.00	0.00
9,300.0	90.00	359.61	6,957.3	2,001.2	608.5	2,064.2	0.00	0.00	0.00
9,400.0	90.00	359.61	6,957.3	2,101.2	607.9	2,163.3	0.00	0.00	0.00
9,500.0	90.00	359.61	6,957.3	2,201.2	607.2	2,262.3	0.00	0.00	0.00
9,600.0	90.00	359.61	6,957.3	2,301.2	606.5	2,361.3	0.00	0.00	0.00

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,700.0	90.00	359.61	6,957.3	2,401.2	605.8	2,460.3	0.00	0.00	0.00
9,800.0	90.00	359.61	6,957.3	2,501.2	605.1	2,559.4	0.00	0.00	0.00
9,900.0	90.00	359.61	6,957.3	2,601.2	604.5	2,658.4	0.00	0.00	0.00
10,000.0	90.00	359.61	6,957.3	2,701.2	603.8	2,757.4	0.00	0.00	0.00
10,100.0	90.00	359.61	6,957.3	2,801.2	603.1	2,856.4	0.00	0.00	0.00
10,200.0	90.00	359.61	6,957.3	2,901.2	602.4	2,955.5	0.00	0.00	0.00
10,300.0	90.00	359.61	6,957.3	3,001.2	601.7	3,054.5	0.00	0.00	0.00
10,400.0	90.00	359.61	6,957.3	3,101.2	601.1	3,153.5	0.00	0.00	0.00
10,500.0	90.00	359.61	6,957.3	3,201.2	600.4	3,252.5	0.00	0.00	0.00
10,600.0	90.00	359.61	6,957.3	3,301.2	599.7	3,351.5	0.00	0.00	0.00
10,700.0	90.00	359.61	6,957.3	3,401.2	599.0	3,450.6	0.00	0.00	0.00
10,800.0	90.00	359.61	6,957.3	3,501.2	598.3	3,549.6	0.00	0.00	0.00
10,900.0	90.00	359.61	6,957.3	3,601.2	597.7	3,648.6	0.00	0.00	0.00
11,000.0	90.00	359.61	6,957.3	3,701.2	597.0	3,747.6	0.00	0.00	0.00
11,100.0	90.00	359.61	6,957.3	3,801.2	596.3	3,846.7	0.00	0.00	0.00
11,200.0	90.00	359.61	6,957.3	3,901.2	595.6	3,945.7	0.00	0.00	0.00
11,300.0	90.00	359.61	6,957.3	4,001.2	594.9	4,044.7	0.00	0.00	0.00
11,400.0	90.00	359.61	6,957.3	4,101.2	594.3	4,143.7	0.00	0.00	0.00
11,500.0	90.00	359.61	6,957.3	4,201.2	593.6	4,242.8	0.00	0.00	0.00
11,600.0	90.00	359.61	6,957.3	4,301.1	592.9	4,341.8	0.00	0.00	0.00
11,700.0	90.00	359.61	6,957.3	4,401.1	592.2	4,440.8	0.00	0.00	0.00
11,723.2	90.00	359.61	6,957.3	4,424.3	592.1	4,463.8	0.00	0.00	0.00
BHL 470'FNL & 1040'FWL									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)		Name	Casing Diameter (")	Hole Diameter (")
7,375.6	6,957.3	7"		7	7-1/2

Plan Annotations					
	Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
			+N/-S	+E/-W	
			(ft)	(ft)	
	5,010.0	5,010.0	0.0	0.0	KOP - Start Build 3.00
	6,534.5	6,419.0	-340.5	391.0	Start DLS 13.00 TFO -127.38
	11,723.2	6,957.3	4,424.3	592.1	TD at 11723.2



## **Great Western**

**SEC.34-T7N-R64W**

**Bruegman Pad Sec.34-T7N-R64W**

**Bruegman South EG 34-024HN**

**Wellbore #1**

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

## **Anticollision Report**

**12 November, 2013**

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Bruegman South EG 34-024HN
<b>Project:</b>	SEC.34-T7N-R64W	<b>TVD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Reference Site:</b>	Bruegman Pad Sec.34-T7N-R64W	<b>MD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Bruegman South EG 34-024HN	<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 (11-1-13)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #1 (11-1-13)		
<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 1,000.0ft	<b>Error Surface:</b>	Elliptical Conic
<b>Warning Levels Evaluated at:</b>	2.00 Sigma		

<b>Survey Tool Program</b>	<b>Date</b> 11/1/2013			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>
0.0	11,723.2	Plan #1 (11-1-13) (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>						
Bruegman Pad Sec.34-T7N-R64W						
Bruegman South EG 34-022HN - Wellbore #1 - Plan #1 (	5,000.0	5,000.0	60.3	38.1	2.712	CC, ES, SF
Bruegman South EG 34-024HC - Wellbore #1 - Plan #1 (	5,000.0	5,000.0	30.3	8.0	1.361	Level 3, CC, ES, SF
Bruegman South EG 34-027HC - Wellbore #1 - Plan #1 (	4,200.0	4,200.0	60.1	41.5	3.222	CC, ES, SF
Bruegman South EG 34-027HN - Wellbore #1 - Plan #1 (	4,433.4	4,433.4	30.1	10.4	1.525	CC, ES, SF
Bruegman South EG 34-029HN - Wellbore #1 - Plan #1 (	3,500.0	3,500.0	90.2	74.7	5.814	CC, ES
Bruegman South EG 34-029HN - Wellbore #1 - Plan #1 (	3,600.0	3,595.8	92.4	76.5	5.802	SF

<b>Offset Design</b>	Bruegman Pad Sec.34-T7N-R64W - Bruegman South EG 34-022HN - Wellbore #1 - Plan #1 (11-1-13)												<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>Measured Depth (ft)</b>	<b>Vertical Depth (ft)</b>	<b>Offset Measured Depth (ft)</b>	<b>Vertical Depth (ft)</b>	<b>Semi Major Axis 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>Distance Between Centres (ft)</b>	<b>Distance Between Ellipses (ft)</b>	<b>Minimum Separation (ft)</b>	<b>Separation Factor</b>	<b>Warning</b>
0.0	0.0	0.0	0.0	0.0	0.0	0.0	-52.86	36.4	-48.1	60.3				
100.0	100.0	100.0	100.0	100.0	0.1	0.1	-52.86	36.4	-48.1	60.3	60.1	0.22	268.443	
200.0	200.0	200.0	200.0	200.0	0.3	0.3	-52.86	36.4	-48.1	60.3	59.7	0.67	89.481	
300.0	300.0	300.0	300.0	300.0	0.6	0.6	-52.86	36.4	-48.1	60.3	59.2	1.12	53.689	
400.0	400.0	400.0	400.0	400.0	0.8	0.8	-52.86	36.4	-48.1	60.3	58.8	1.57	38.349	
500.0	500.0	500.0	500.0	500.0	1.0	1.0	-52.86	36.4	-48.1	60.3	58.3	2.02	29.827	
600.0	600.0	600.0	600.0	600.0	1.2	1.2	-52.86	36.4	-48.1	60.3	57.9	2.47	24.404	
700.0	700.0	700.0	700.0	700.0	1.5	1.5	-52.86	36.4	-48.1	60.3	57.4	2.92	20.649	
800.0	800.0	800.0	800.0	800.0	1.7	1.7	-52.86	36.4	-48.1	60.3	57.0	3.37	17.896	
900.0	900.0	900.0	900.0	900.0	1.9	1.9	-52.86	36.4	-48.1	60.3	56.5	3.82	15.791	
1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-52.86	36.4	-48.1	60.3	56.1	4.27	14.129	
1,100.0	1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-52.86	36.4	-48.1	60.3	55.6	4.72	12.783	
1,200.0	1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-52.86	36.4	-48.1	60.3	55.2	5.17	11.671	
1,300.0	1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-52.86	36.4	-48.1	60.3	54.7	5.62	10.738	
1,400.0	1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-52.86	36.4	-48.1	60.3	54.3	6.07	9.942	
1,500.0	1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-52.86	36.4	-48.1	60.3	53.8	6.52	9.257	
1,600.0	1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	-52.86	36.4	-48.1	60.3	53.4	6.97	8.659	
1,700.0	1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	-52.86	36.4	-48.1	60.3	52.9	7.42	8.135	
1,800.0	1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-52.86	36.4	-48.1	60.3	52.5	7.87	7.670	
1,900.0	1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	-52.86	36.4	-48.1	60.3	52.0	8.32	7.255	
2,000.0	2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	-52.86	36.4	-48.1	60.3	51.6	8.77	6.883	

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 Bruegman South EG 34-024HN
<b>Project:</b>	SEC.34-T7N-R64W	<b>TVD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Reference Site:</b>	Bruegman Pad Sec.34-T7N-R64W	<b>MD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Bruegman South EG 34-024HN	<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 (11-1-13)	<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	-52.86	36.4	-48.1	60.3	51.1	9.22	6.547		
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	-52.86	36.4	-48.1	60.3	50.7	9.66	6.243		
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	-52.86	36.4	-48.1	60.3	50.2	10.11	5.965		
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	-52.86	36.4	-48.1	60.3	49.8	10.56	5.712		
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	-52.86	36.4	-48.1	60.3	49.3	11.01	5.478		
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	-52.86	36.4	-48.1	60.3	48.9	11.46	5.264		
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	-52.86	36.4	-48.1	60.3	48.4	11.91	5.065		
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	-52.86	36.4	-48.1	60.3	48.0	12.36	4.881		
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	-52.86	36.4	-48.1	60.3	47.5	12.81	4.710		
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	-52.86	36.4	-48.1	60.3	47.1	13.26	4.550		
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	-52.86	36.4	-48.1	60.3	46.6	13.71	4.401		
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	-52.86	36.4	-48.1	60.3	46.2	14.16	4.261		
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	-52.86	36.4	-48.1	60.3	45.7	14.61	4.130		
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	-52.86	36.4	-48.1	60.3	45.3	15.06	4.007		
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	-52.86	36.4	-48.1	60.3	44.8	15.51	3.890		
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	-52.86	36.4	-48.1	60.3	44.4	15.96	3.781		
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	-52.86	36.4	-48.1	60.3	43.9	16.41	3.677		
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	-52.86	36.4	-48.1	60.3	43.5	16.86	3.579		
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	-52.86	36.4	-48.1	60.3	43.0	17.31	3.486		
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	-52.86	36.4	-48.1	60.3	42.6	17.76	3.398		
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	-52.86	36.4	-48.1	60.3	42.1	18.21	3.314		
4,200.0	4,200.0	4,200.0	4,200.0	9.3	9.3	-52.86	36.4	-48.1	60.3	41.7	18.66	3.234		
4,300.0	4,300.0	4,300.0	4,300.0	9.6	9.6	-52.86	36.4	-48.1	60.3	41.2	19.11	3.158		
4,400.0	4,400.0	4,400.0	4,400.0	9.8	9.8	-52.86	36.4	-48.1	60.3	40.8	19.55	3.086		
4,500.0	4,500.0	4,500.0	4,500.0	10.0	10.0	-52.86	36.4	-48.1	60.3	40.3	20.00	3.016		
4,600.0	4,600.0	4,600.0	4,600.0	10.2	10.2	-52.86	36.4	-48.1	60.3	39.9	20.45	2.950		
4,700.0	4,700.0	4,700.0	4,700.0	10.5	10.5	-52.86	36.4	-48.1	60.3	39.4	20.90	2.886		
4,800.0	4,800.0	4,800.0	4,800.0	10.7	10.7	-52.86	36.4	-48.1	60.3	39.0	21.35	2.826		
4,900.0	4,900.0	4,900.0	4,900.0	10.9	10.9	-52.86	36.4	-48.1	60.3	38.5	21.80	2.767		
5,000.0	5,000.0	5,000.0	5,000.0	11.1	11.1	-52.86	36.4	-48.1	60.3	38.1	22.25	2.712 CC, ES, SF		
5,100.0	5,100.0	5,100.0	5,100.0	11.3	11.4	176.22	36.4	-48.1	62.5	39.8	22.66	2.756		
5,200.0	5,199.7	5,199.7	5,199.7	11.5	11.6	176.60	36.4	-48.1	69.8	46.8	22.99	3.035		
5,300.0	5,298.9	5,298.9	5,298.9	11.7	11.8	177.10	36.4	-48.1	82.3	59.0	23.26	3.537		
5,400.0	5,397.3	5,402.4	5,402.3	11.9	12.0	176.15	32.8	-47.5	97.4	74.0	23.46	4.153		
5,500.0	5,494.6	5,506.4	5,505.7	12.1	12.2	172.94	21.8	-45.8	112.7	89.2	23.58	4.781		
5,600.0	5,590.7	5,610.5	5,608.1	12.4	12.4	168.32	3.3	-43.0	128.8	105.1	23.68	5.438		
5,700.0	5,685.1	5,714.1	5,708.4	12.7	12.5	162.84	-22.3	-39.0	146.3	122.5	23.80	6.147		
5,800.0	5,777.7	5,816.8	5,805.7	13.0	12.8	156.94	-54.7	-33.9	166.0	142.0	23.99	6.917		
5,900.0	5,868.1	5,918.3	5,899.3	13.4	13.0	150.96	-93.4	-27.9	188.5	164.2	24.34	7.746		
6,000.0	5,956.3	6,018.3	5,988.5	13.9	13.4	145.15	-137.8	-21.0	214.4	189.5	24.89	8.614		
6,100.0	6,042.8	6,112.8	6,071.3	14.5	13.7	140.69	-183.0	-14.0	243.1	217.2	25.86	9.400		
6,200.0	6,129.4	6,207.1	6,153.8	15.1	14.1	137.22	-228.1	-7.0	272.8	245.9	26.93	10.130		
6,300.0	6,216.0	6,301.4	6,236.3	15.8	14.6	134.43	-273.2	0.0	303.3	275.2	28.08	10.803		
6,400.0	6,302.5	6,396.3	6,319.4	16.6	15.1	132.17	-318.5	7.0	334.3	305.0	29.28	11.417		
6,500.0	6,389.1	6,496.8	6,413.2	17.3	15.6	132.52	-353.3	14.9	364.7	334.4	30.24	12.060		
6,600.0	6,476.9	6,593.6	6,508.6	18.0	15.8	152.02	-365.8	22.7	394.9	364.6	30.33	13.021		
6,700.0	6,568.2	6,686.5	6,600.7	18.6	16.0	-172.93	-358.0	30.1	427.1	396.9	30.18	14.152		
6,800.0	6,658.7	6,777.0	6,687.0	19.0	16.0	-140.89	-331.9	36.8	459.4	429.1	30.23	15.196		
6,900.0	6,743.8	6,866.4	6,765.2	19.3	15.9	-119.56	-289.4	42.8	489.8	459.4	30.44	16.090		
7,000.0	6,819.1	6,955.4	6,833.0	19.4	15.7	-106.35	-232.2	47.9	516.7	486.1	30.69	16.837		
7,100.0	6,880.8	7,044.6	6,888.1	19.4	15.6	-98.09	-162.4	51.8	538.7	507.8	30.91	17.428		
7,200.0	6,925.6	7,134.4	6,928.3	19.4	15.5	-93.09	-82.4	54.4	554.7	523.6	31.16	17.800		

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 Bruegman South EG 34-024HN
<b>Project:</b>	SEC.34-T7N-R64W	<b>TVD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Reference Site:</b>	Bruegman Pad Sec.34-T7N-R64W	<b>MD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Bruegman South EG 34-024HN	<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 (11-1-13)	<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	6,951.4	7,225.0	6,951.7	19.3	15.6	-90.54	5.0	55.7	563.9	532.3	31.57	17.862		
7,400.0	6,957.3	7,317.2	6,957.3	19.3	15.8	-90.00	96.9	55.4	566.1	533.8	32.21	17.572		
7,500.0	6,957.3	7,417.2	6,957.3	19.4	16.3	-90.00	196.9	54.7	566.1	533.0	33.13	17.089		
7,600.0	6,957.3	7,517.2	6,957.3	19.6	16.9	-90.00	296.9	53.9	566.2	531.8	34.45	16.435		
7,700.0	6,957.3	7,617.2	6,957.3	20.2	17.8	-90.00	396.9	53.1	566.3	530.2	36.14	15.669		
7,800.0	6,957.3	7,717.2	6,957.3	21.0	18.8	-90.00	496.9	52.4	566.4	528.3	38.15	14.848		
7,900.0	6,957.3	7,817.2	6,957.3	22.0	19.9	-90.00	596.9	51.6	566.5	526.1	40.42	14.016		
8,000.0	6,957.3	7,917.2	6,957.3	23.2	21.2	-90.00	696.9	50.8	566.6	523.7	42.92	13.202		
8,100.0	6,957.3	8,017.2	6,957.3	24.4	22.6	-90.00	796.9	50.1	566.7	521.1	45.61	12.425		
8,200.0	6,957.3	8,117.2	6,957.3	25.8	24.0	-90.00	896.9	49.3	566.8	518.3	48.45	11.698		
8,300.0	6,957.3	8,217.2	6,957.3	27.2	25.5	-90.00	996.9	48.5	566.8	515.4	51.43	11.022		
8,400.0	6,957.3	8,317.2	6,957.3	28.7	27.0	-90.00	1,096.9	47.8	566.9	512.4	54.51	10.400		
8,500.0	6,957.3	8,417.2	6,957.3	30.2	28.6	-90.00	1,196.9	47.0	567.0	509.3	57.69	9.828		
8,600.0	6,957.3	8,517.2	6,957.3	31.8	30.3	-90.00	1,296.9	46.2	567.1	506.2	60.95	9.305		
8,700.0	6,957.3	8,617.2	6,957.3	33.4	31.9	-90.00	1,396.9	45.5	567.2	502.9	64.27	8.825		
8,800.0	6,957.3	8,717.2	6,957.3	35.1	33.6	-90.00	1,496.9	44.7	567.3	499.6	67.65	8.386		
8,900.0	6,957.3	8,817.2	6,957.3	36.7	35.3	-90.00	1,596.9	43.9	567.4	496.3	71.07	7.983		
9,000.0	6,957.3	8,917.2	6,957.3	38.4	37.1	-90.00	1,696.9	43.1	567.5	492.9	74.54	7.612		
9,100.0	6,957.3	9,017.2	6,957.3	40.1	38.8	-90.00	1,796.8	42.4	567.5	489.5	78.05	7.272		
9,200.0	6,957.3	9,117.2	6,957.3	41.9	40.6	-90.00	1,896.8	41.6	567.6	486.0	81.58	6.958		
9,300.0	6,957.3	9,217.2	6,957.3	43.6	42.4	-90.00	1,996.8	40.8	567.7	482.6	85.15	6.668		
9,400.0	6,957.3	9,317.2	6,957.3	45.4	44.2	-90.00	2,096.8	40.1	567.8	479.1	88.73	6.399		
9,500.0	6,957.3	9,417.2	6,957.3	47.2	46.0	-90.00	2,196.8	39.3	567.9	475.5	92.34	6.150		
9,600.0	6,957.3	9,517.2	6,957.3	48.9	47.8	-90.00	2,296.8	38.5	568.0	472.0	95.97	5.918		
9,700.0	6,957.3	9,617.2	6,957.3	50.7	49.6	-90.00	2,396.8	37.8	568.1	468.5	99.61	5.703		
9,800.0	6,957.3	9,717.2	6,957.3	52.5	51.5	-90.00	2,496.8	37.0	568.2	464.9	103.27	5.502		
9,900.0	6,957.3	9,817.2	6,957.3	54.4	53.3	-90.00	2,596.8	36.2	568.2	461.3	106.94	5.313		
10,000.0	6,957.3	9,917.2	6,957.3	56.2	55.1	-90.00	2,696.8	35.5	568.3	457.7	110.63	5.137		
10,100.0	6,957.3	10,017.2	6,957.3	58.0	57.0	-90.00	2,796.8	34.7	568.4	454.1	114.33	4.972		
10,200.0	6,957.3	10,117.2	6,957.3	59.8	58.8	-90.00	2,896.8	33.9	568.5	450.5	118.03	4.817		
10,300.0	6,957.3	10,217.2	6,957.3	61.7	60.7	-90.00	2,996.8	33.2	568.6	446.8	121.75	4.670		
10,400.0	6,957.3	10,317.2	6,957.3	63.5	62.6	-90.00	3,096.8	32.4	568.7	443.2	125.47	4.532		
10,500.0	6,957.3	10,417.2	6,957.3	65.4	64.4	-90.00	3,196.8	31.6	568.8	439.6	129.20	4.402		
10,600.0	6,957.3	10,517.2	6,957.3	67.2	66.3	-90.00	3,296.8	30.9	568.9	435.9	132.94	4.279		
10,700.0	6,957.3	10,617.2	6,957.3	69.1	68.2	-90.00	3,396.8	30.1	568.9	432.3	136.68	4.162		
10,800.0	6,957.3	10,717.2	6,957.3	70.9	70.1	-90.00	3,496.8	29.3	569.0	428.6	140.43	4.052		
10,900.0	6,957.3	10,817.2	6,957.3	72.8	71.9	-90.00	3,596.8	28.6	569.1	424.9	144.19	3.947		
11,000.0	6,957.3	10,917.2	6,957.3	74.7	73.8	-90.00	3,696.8	27.8	569.2	421.3	147.95	3.847		
11,100.0	6,957.3	11,017.2	6,957.3	76.5	75.7	-90.00	3,796.8	27.0	569.3	417.6	151.71	3.752		
11,200.0	6,957.3	11,117.2	6,957.3	78.4	77.6	-90.00	3,896.8	26.3	569.4	413.9	155.48	3.662		
11,300.0	6,957.3	11,217.2	6,957.3	80.3	79.5	-90.00	3,996.8	25.5	569.5	410.2	159.26	3.576		
11,400.0	6,957.3	11,317.2	6,957.3	82.2	81.4	-90.00	4,096.8	24.7	569.6	406.5	163.03	3.494		
11,500.0	6,957.3	11,417.2	6,957.3	84.0	83.2	-90.00	4,196.8	24.0	569.6	402.8	166.81	3.415		
11,600.0	6,957.3	11,517.2	6,957.3	85.9	85.1	-90.00	4,296.8	23.2	569.7	399.1	170.60	3.340		
11,700.0	6,957.3	11,617.2	6,957.3	87.8	87.0	-90.00	4,396.8	22.4	569.8	395.4	174.38	3.268		
11,723.2	6,957.3	11,640.3	6,957.3	88.2	87.5	-90.00	4,420.0	22.2	569.8	394.6	175.26	3.251		

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Bruegman South EG 34-024HN
<b>Project:</b>	SEC.34-T7N-R64W	<b>TVD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Reference Site:</b>	Bruegman Pad Sec.34-T7N-R64W	<b>MD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Bruegman South EG 34-024HN	<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 (11-1-13)	<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	-53.03	18.2	-24.2	30.3					
100.0	100.0	100.0	100.0	0.1	0.1	-53.03	18.2	-24.2	30.3	30.0	0.22	134.693		
200.0	200.0	200.0	200.0	0.3	0.3	-53.03	18.2	-24.2	30.3	29.6	0.67	44.898		
300.0	300.0	300.0	300.0	0.6	0.6	-53.03	18.2	-24.2	30.3	29.2	1.12	26.939		
400.0	400.0	400.0	400.0	0.8	0.8	-53.03	18.2	-24.2	30.3	28.7	1.57	19.242		
500.0	500.0	500.0	500.0	1.0	1.0	-53.03	18.2	-24.2	30.3	28.3	2.02	14.966		
600.0	600.0	600.0	600.0	1.2	1.2	-53.03	18.2	-24.2	30.3	27.8	2.47	12.245		
700.0	700.0	700.0	700.0	1.5	1.5	-53.03	18.2	-24.2	30.3	27.4	2.92	10.361		
800.0	800.0	800.0	800.0	1.7	1.7	-53.03	18.2	-24.2	30.3	26.9	3.37	8.980		
900.0	900.0	900.0	900.0	1.9	1.9	-53.03	18.2	-24.2	30.3	26.5	3.82	7.923		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	-53.03	18.2	-24.2	30.3	26.0	4.27	7.089		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	-53.03	18.2	-24.2	30.3	25.6	4.72	6.414		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	-53.03	18.2	-24.2	30.3	25.1	5.17	5.856		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	-53.03	18.2	-24.2	30.3	24.7	5.62	5.388		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	-53.03	18.2	-24.2	30.3	24.2	6.07	4.989		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	-53.03	18.2	-24.2	30.3	23.8	6.52	4.645		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	-53.03	18.2	-24.2	30.3	23.3	6.97	4.345		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	-53.03	18.2	-24.2	30.3	22.9	7.42	4.082		
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	-53.03	18.2	-24.2	30.3	22.4	7.87	3.848		
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	-53.03	18.2	-24.2	30.3	22.0	8.32	3.640		
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	-53.03	18.2	-24.2	30.3	21.5	8.77	3.454		
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	-53.03	18.2	-24.2	30.3	21.1	9.22	3.285		
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	-53.03	18.2	-24.2	30.3	20.6	9.66	3.132		
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	-53.03	18.2	-24.2	30.3	20.2	10.11	2.993		
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	-53.03	18.2	-24.2	30.3	19.7	10.56	2.866		
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	-53.03	18.2	-24.2	30.3	19.3	11.01	2.749		
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	-53.03	18.2	-24.2	30.3	18.8	11.46	2.641		
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	-53.03	18.2	-24.2	30.3	18.4	11.91	2.541		
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	-53.03	18.2	-24.2	30.3	17.9	12.36	2.449		
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	-53.03	18.2	-24.2	30.3	17.5	12.81	2.363		
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	-53.03	18.2	-24.2	30.3	17.0	13.26	2.283		
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	-53.03	18.2	-24.2	30.3	16.6	13.71	2.208		
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	-53.03	18.2	-24.2	30.3	16.1	14.16	2.138		
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	-53.03	18.2	-24.2	30.3	15.7	14.61	2.072		
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	-53.03	18.2	-24.2	30.3	15.2	15.06	2.010		
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	-53.03	18.2	-24.2	30.3	14.8	15.51	1.952		
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	-53.03	18.2	-24.2	30.3	14.3	15.96	1.897		
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	-53.03	18.2	-24.2	30.3	13.9	16.41	1.845		
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	-53.03	18.2	-24.2	30.3	13.4	16.86	1.796		
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	-53.03	18.2	-24.2	30.3	13.0	17.31	1.749		
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	-53.03	18.2	-24.2	30.3	12.5	17.76	1.705		
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	-53.03	18.2	-24.2	30.3	12.1	18.21	1.663		
4,200.0	4,200.0	4,200.0	4,200.0	9.3	9.3	-53.03	18.2	-24.2	30.3	11.6	18.66	1.623		
4,300.0	4,300.0	4,300.0	4,300.0	9.6	9.6	-53.03	18.2	-24.2	30.3	11.2	19.11	1.585		
4,400.0	4,400.0	4,400.0	4,400.0	9.8	9.8	-53.03	18.2	-24.2	30.3	10.7	19.55	1.548		
4,500.0	4,500.0	4,500.0	4,500.0	10.0	10.0	-53.03	18.2	-24.2	30.3	10.3	20.00	1.513		
4,600.0	4,600.0	4,600.0	4,600.0	10.2	10.2	-53.03	18.2	-24.2	30.3	9.8	20.45	1.480 Level 3		
4,700.0	4,700.0	4,700.0	4,700.0	10.5	10.5	-53.03	18.2	-24.2	30.3	9.4	20.90	1.448 Level 3		
4,800.0	4,800.0	4,800.0	4,800.0	10.7	10.7	-53.03	18.2	-24.2	30.3	8.9	21.35	1.418 Level 3		
4,900.0	4,900.0	4,900.0	4,900.0	10.9	10.9	-53.03	18.2	-24.2	30.3	8.5	21.80	1.389 Level 3		
5,000.0	5,000.0	5,000.0	5,000.0	11.1	11.1	-53.03	18.2	-24.2	30.3	8.0	22.25	1.361 Level 3, CC, ES, SF		
5,100.0	5,100.0	5,100.0	5,100.0	11.3	11.4	176.18	18.2	-24.2	32.4	9.7	22.66	1.429 Level 3		

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

Bruegman Pad Sec.34-T7N-R64W - Bruegman South EG 34-024HC - Wellbore #1 - Plan #1 (11-1-13)													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Minimum Separation	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)	(ft)			
5,200.0	5,199.7	5,200.7	5,200.7	11.5	11.6	176.64	17.7	-23.8	39.1	16.1	22.97	1.700		
5,300.0	5,298.9	5,302.6	5,302.5	11.7	11.7	175.87	13.4	-20.5	46.5	23.2	23.20	2.002		
5,400.0	5,397.3	5,404.9	5,404.2	11.9	11.9	174.19	4.8	-13.8	53.9	30.6	23.38	2.307		
5,500.0	5,494.6	5,507.6	5,505.5	12.1	12.1	171.93	-8.2	-3.7	61.5	38.0	23.51	2.618		
5,600.0	5,590.7	5,610.5	5,606.1	12.4	12.3	169.29	-25.5	9.7	69.4	45.8	23.61	2.938		
5,700.0	5,685.1	5,713.8	5,705.6	12.7	12.6	166.40	-47.1	26.4	77.5	53.8	23.70	3.268		
5,800.0	5,777.7	5,817.3	5,803.8	13.0	12.8	163.36	-73.0	46.5	85.9	62.1	23.80	3.610		
5,900.0	5,868.1	5,921.1	5,900.4	13.4	13.2	160.24	-103.2	69.9	94.7	70.8	23.94	3.957		
6,000.0	5,956.3	6,023.6	5,993.6	13.9	13.6	157.22	-136.8	96.0	104.3	80.1	24.16	4.316		
6,100.0	6,042.8	6,122.9	6,083.4	14.5	14.0	155.17	-170.2	121.9	115.9	91.1	24.79	4.675		
6,200.0	6,129.4	6,222.1	6,173.2	15.1	14.5	153.52	-203.7	147.8	127.7	102.1	25.54	5.000		
6,300.0	6,216.0	6,321.4	6,262.9	15.8	15.0	152.15	-237.1	173.7	139.5	113.2	26.34	5.298		
6,400.0	6,302.5	6,420.6	6,352.7	16.6	15.5	151.00	-270.5	199.6	151.5	124.3	27.19	5.570		
6,500.0	6,389.1	6,519.9	6,442.5	17.3	16.1	150.01	-304.0	225.5	163.4	135.3	28.10	5.816		
6,600.0	6,476.9	6,618.8	6,532.0	18.0	16.7	162.49	-337.3	251.4	174.9	145.7	29.23	5.985		
6,700.0	6,568.2	6,713.8	6,620.2	18.6	17.2	-173.26	-361.0	276.8	186.5	156.0	30.45	6.124		
6,800.0	6,658.7	6,812.2	6,714.6	19.0	17.5	-150.87	-364.4	303.8	199.7	168.6	31.13	6.416		
6,900.0	6,743.8	6,915.2	6,811.5	19.3	17.8	-137.72	-344.6	331.4	213.8	182.6	31.22	6.849		
7,000.0	6,819.1	7,023.2	6,905.6	19.4	17.8	-131.12	-299.3	358.1	227.6	196.8	30.80	7.389		
7,100.0	6,880.8	7,136.6	6,989.9	19.4	17.8	-127.87	-227.8	381.8	239.8	209.7	30.12	7.960		
7,200.0	6,925.6	7,255.0	7,056.3	19.4	17.6	-126.32	-132.0	400.2	249.3	219.7	29.57	8.431		
7,300.0	6,951.4	7,377.2	7,096.7	19.3	17.5	-125.67	-17.6	411.0	254.9	225.4	29.53	8.633		
7,400.0	6,957.3	7,495.4	7,106.3	19.3	17.3	-125.55	99.9	413.0	256.3	226.1	30.19	8.490		
7,500.0	6,957.3	7,595.4	7,106.3	19.4	17.5	-125.56	199.9	412.3	256.2	225.1	31.15	8.224		
7,600.0	6,957.3	7,695.4	7,106.3	19.6	18.1	-125.56	299.9	411.7	256.2	223.8	32.42	7.901		
7,700.0	6,957.3	7,795.4	7,106.3	20.2	19.0	-125.57	399.9	411.1	256.1	222.2	33.95	7.544		
7,800.0	6,957.3	7,895.4	7,106.3	21.0	20.0	-125.58	499.9	410.5	256.1	220.4	35.72	7.170		
7,900.0	6,957.3	7,995.4	7,106.3	22.0	21.1	-125.58	599.9	409.8	256.1	218.4	37.68	6.796		
8,000.0	6,957.3	8,095.4	7,106.3	23.2	22.3	-125.59	699.9	409.2	256.0	216.2	39.81	6.432		
8,100.0	6,957.3	8,195.4	7,106.3	24.4	23.7	-125.60	799.9	408.6	256.0	213.9	42.08	6.083		
8,200.0	6,957.3	8,295.4	7,106.3	25.8	25.1	-125.60	899.9	407.9	255.9	211.5	44.47	5.755		
8,300.0	6,957.3	8,395.4	7,106.3	27.2	26.5	-125.61	999.9	407.3	255.9	208.9	46.96	5.449		
8,400.0	6,957.3	8,495.4	7,106.3	28.7	28.0	-125.62	1,099.9	406.7	255.8	206.3	49.55	5.164		
8,500.0	6,957.3	8,595.4	7,106.3	30.2	29.6	-125.63	1,199.9	406.1	255.8	203.6	52.20	4.900		
8,600.0	6,957.3	8,695.4	7,106.3	31.8	31.2	-125.63	1,299.9	405.4	255.8	200.8	54.92	4.657		
8,700.0	6,957.3	8,795.4	7,106.3	33.4	32.8	-125.64	1,399.9	404.8	255.7	198.0	57.69	4.433		
8,800.0	6,957.3	8,895.4	7,106.3	35.1	34.5	-125.65	1,499.9	404.2	255.7	195.2	60.51	4.225		
8,900.0	6,957.3	8,995.4	7,106.3	36.7	36.2	-125.65	1,599.9	403.5	255.6	192.3	63.37	4.034		
9,000.0	6,957.3	9,095.4	7,106.3	38.4	37.9	-125.66	1,699.9	402.9	255.6	189.3	66.26	3.857		
9,100.0	6,957.3	9,195.4	7,106.3	40.1	39.6	-125.67	1,799.9	402.3	255.5	186.4	69.19	3.694		
9,200.0	6,957.3	9,295.4	7,106.3	41.9	41.4	-125.67	1,899.9	401.7	255.5	183.4	72.14	3.542		
9,300.0	6,957.3	9,395.4	7,106.3	43.6	43.1	-125.68	1,999.9	401.0	255.5	180.4	75.11	3.401		
9,400.0	6,957.3	9,495.4	7,106.3	45.4	44.9	-125.69	2,099.9	400.4	255.4	177.3	78.11	3.270		
9,500.0	6,957.3	9,595.4	7,106.3	47.2	46.7	-125.69	2,199.9	399.8	255.4	174.3	81.12	3.148		
9,600.0	6,957.3	9,695.4	7,106.3	48.9	48.5	-125.70	2,299.9	399.2	255.3	171.2	84.15	3.034		
9,700.0	6,957.3	9,795.4	7,106.3	50.7	50.3	-125.71	2,399.9	398.5	255.3	168.1	87.20	2.928		
9,800.0	6,957.3	9,895.4	7,106.3	52.5	52.1	-125.71	2,499.9	397.9	255.3	165.0	90.25	2.828		
9,900.0	6,957.3	9,995.4	7,106.3	54.4	53.9	-125.72	2,599.9	397.3	255.2	161.9	93.32	2.735		
10,000.0	6,957.3	10,095.4	7,106.3	56.2	55.8	-125.73	2,699.9	396.6	255.2	158.8	96.41	2.647		
10,100.0	6,957.3	10,195.4	7,106.3	58.0	57.6	-125.73	2,799.9	396.0	255.1	155.6	99.50	2.564		
10,200.0	6,957.3	10,295.4	7,106.3	59.8	59.4	-125.74	2,899.9	395.4	255.1	152.5	102.59	2.486		
10,300.0	6,957.3	10,395.4	7,106.3	61.7	61.3	-125.75	2,999.9	394.8	255.0	149.3	105.70	2.413		

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Bruegman South EG 34-024HN
<b>Project:</b>	SEC.34-T7N-R64W	<b>TVD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Reference Site:</b>	Bruegman Pad Sec.34-T7N-R64W	<b>MD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Bruegman South EG 34-024HN	<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 (11-1-13)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Bruegman Pad Sec.34-T7N-R64W - Bruegman South EG 34-024HC - Wellbore #1 - Plan #1 (11-1-13)												<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	6,957.3	10,495.4	7,106.3	63.5	63.1	-125.75	3,099.9	394.1	255.0	146.2	108.81	2.343	
10,500.0	6,957.3	10,595.4	7,106.3	65.4	65.0	-125.76	3,199.9	393.5	255.0	143.0	111.93	2.278	
10,600.0	6,957.3	10,695.4	7,106.3	67.2	66.9	-125.77	3,299.9	392.9	254.9	139.9	115.06	2.215	
10,700.0	6,957.3	10,795.4	7,106.3	69.1	68.7	-125.77	3,399.9	392.2	254.9	136.7	118.19	2.156	
10,800.0	6,957.3	10,895.4	7,106.3	70.9	70.6	-125.78	3,499.9	391.6	254.8	133.5	121.33	2.100	
10,900.0	6,957.3	10,995.4	7,106.3	72.8	72.5	-125.79	3,599.9	391.0	254.8	130.3	124.47	2.047	
11,000.0	6,957.3	11,095.4	7,106.3	74.7	74.3	-125.80	3,699.9	390.4	254.7	127.1	127.62	1.996	
11,100.0	6,957.3	11,195.4	7,106.3	76.5	76.2	-125.80	3,799.9	389.7	254.7	123.9	130.76	1.948	
11,200.0	6,957.3	11,295.4	7,106.3	78.4	78.1	-125.81	3,899.9	389.1	254.7	120.7	133.92	1.902	
11,300.0	6,957.3	11,395.4	7,106.3	80.3	80.0	-125.82	3,999.9	388.5	254.6	117.5	137.07	1.858	
11,400.0	6,957.3	11,495.4	7,106.3	82.2	81.8	-125.82	4,099.9	387.8	254.6	114.3	140.23	1.815	
11,500.0	6,957.3	11,595.4	7,106.3	84.0	83.7	-125.83	4,199.9	387.2	254.5	111.1	143.39	1.775	
11,600.0	6,957.3	11,695.4	7,106.3	85.9	85.6	-125.84	4,299.9	386.6	254.5	107.9	146.56	1.736	
11,700.0	6,957.3	11,795.4	7,106.3	87.8	87.5	-125.84	4,399.9	386.0	254.5	104.7	149.73	1.699	
11,723.2	6,957.3	11,818.6	7,106.3	88.2	87.9	-125.84	4,423.0	385.8	254.4	104.0	150.46	1.691	

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Bruegman South EG 34-024HN
<b>Project:</b>	SEC.34-T7N-R64W	<b>TVD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Reference Site:</b>	Bruegman Pad Sec.34-T7N-R64W	<b>MD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Bruegman South EG 34-024HN	<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 (11-1-13)	<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	127.30	-36.4	47.8	60.1					
100.0	100.0	100.0	100.0	0.1	0.1	127.30	-36.4	47.8	60.1	59.9	0.22	267.447		
200.0	200.0	200.0	200.0	0.3	0.3	127.30	-36.4	47.8	60.1	59.4	0.67	89.149		
300.0	300.0	300.0	300.0	0.6	0.6	127.30	-36.4	47.8	60.1	59.0	1.12	53.489		
400.0	400.0	400.0	400.0	0.8	0.8	127.30	-36.4	47.8	60.1	58.5	1.57	38.207		
500.0	500.0	500.0	500.0	1.0	1.0	127.30	-36.4	47.8	60.1	58.1	2.02	29.716		
600.0	600.0	600.0	600.0	1.2	1.2	127.30	-36.4	47.8	60.1	57.6	2.47	24.313		
700.0	700.0	700.0	700.0	1.5	1.5	127.30	-36.4	47.8	60.1	57.2	2.92	20.573		
800.0	800.0	800.0	800.0	1.7	1.7	127.30	-36.4	47.8	60.1	56.7	3.37	17.830		
900.0	900.0	900.0	900.0	1.9	1.9	127.30	-36.4	47.8	60.1	56.3	3.82	15.732		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	127.30	-36.4	47.8	60.1	55.8	4.27	14.076		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	127.30	-36.4	47.8	60.1	55.4	4.72	12.736		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	127.30	-36.4	47.8	60.1	54.9	5.17	11.628		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	127.30	-36.4	47.8	60.1	54.5	5.62	10.698		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	127.30	-36.4	47.8	60.1	54.0	6.07	9.905		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	127.30	-36.4	47.8	60.1	53.6	6.52	9.222		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	127.30	-36.4	47.8	60.1	53.1	6.97	8.627		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	127.30	-36.4	47.8	60.1	52.7	7.42	8.104		
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	127.30	-36.4	47.8	60.1	52.2	7.87	7.641		
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	127.30	-36.4	47.8	60.1	51.8	8.32	7.228		
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	127.30	-36.4	47.8	60.1	51.3	8.77	6.858		
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	127.30	-36.4	47.8	60.1	50.9	9.22	6.523		
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	127.30	-36.4	47.8	60.1	50.4	9.66	6.220		
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	127.30	-36.4	47.8	60.1	50.0	10.11	5.943		
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	127.30	-36.4	47.8	60.1	49.5	10.56	5.690		
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	127.30	-36.4	47.8	60.1	49.1	11.01	5.458		
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	127.30	-36.4	47.8	60.1	48.6	11.46	5.244		
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	127.30	-36.4	47.8	60.1	48.2	11.91	5.046		
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	127.30	-36.4	47.8	60.1	47.8	12.36	4.863		
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	127.30	-36.4	47.8	60.1	47.3	12.81	4.692		
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	127.30	-36.4	47.8	60.1	46.9	13.26	4.533		
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	127.30	-36.4	47.8	60.1	46.4	13.71	4.384		
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	127.30	-36.4	47.8	60.1	46.0	14.16	4.245		
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	127.30	-36.4	47.8	60.1	45.5	14.61	4.115		
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	127.30	-36.4	47.8	60.1	45.1	15.06	3.992		
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	127.30	-36.4	47.8	60.1	44.6	15.51	3.876		
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	127.30	-36.4	47.8	60.1	44.2	15.96	3.767		
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	127.30	-36.4	47.8	60.1	43.7	16.41	3.664		
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	127.30	-36.4	47.8	60.1	43.3	16.86	3.566		
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	127.30	-36.4	47.8	60.1	42.8	17.31	3.473		
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	127.30	-36.4	47.8	60.1	42.4	17.76	3.385		
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	127.30	-36.4	47.8	60.1	41.9	18.21	3.302		
4,200.0	4,200.0	4,200.0	4,200.0	9.3	9.3	127.30	-36.4	47.8	60.1	41.5	18.66	3.222 CC, ES, SF		
4,300.0	4,300.0	4,297.1	4,297.0	9.6	9.5	126.49	-37.1	50.2	62.5	43.4	19.08	3.275		
4,400.0	4,400.0	4,393.6	4,393.3	9.8	9.7	124.38	-39.2	57.2	69.7	50.2	19.50	3.574		
4,500.0	4,500.0	4,489.2	4,488.1	10.0	9.9	121.72	-42.5	68.8	81.8	61.8	19.91	4.106		
4,600.0	4,600.0	4,583.4	4,580.8	10.2	10.1	119.11	-47.1	84.6	98.8	78.4	20.34	4.856		
4,700.0	4,700.0	4,675.7	4,670.8	10.5	10.3	116.86	-52.9	104.4	120.6	99.8	20.78	5.806		
4,800.0	4,800.0	4,765.7	4,757.5	10.7	10.6	115.03	-59.6	127.7	147.2	126.0	21.23	6.935		
4,900.0	4,900.0	4,853.3	4,840.6	10.9	10.9	113.59	-67.3	154.1	178.3	156.6	21.69	8.219		
5,000.0	5,000.0	4,938.1	4,919.9	11.1	11.2	112.47	-75.7	183.1	213.7	191.5	22.18	9.636		
5,100.0	5,100.0	5,020.6	4,995.6	11.3	11.5	-19.26	-84.9	214.5	251.4	229.1	22.26	11.291		

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 Bruegman South EG 34-024HN
<b>Project:</b>	SEC.34-T7N-R64W	<b>TVD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Reference Site:</b>	Bruegman Pad Sec.34-T7N-R64W	<b>MD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Bruegman South EG 34-024HN	<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 (11-1-13)	<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	5,199.7	5,100.0	5,067.1	11.5	11.9	-19.98	-94.5	247.7	288.6	266.0	22.55	12.798	
5,300.0	5,298.9	5,181.8	5,139.1	11.7	12.4	-20.82	-105.3	284.8	325.2	302.4	22.80	14.261	
5,400.0	5,397.3	5,268.2	5,213.7	11.9	12.9	-21.79	-117.5	326.8	360.8	337.8	23.04	15.660	
5,500.0	5,494.6	5,362.6	5,294.9	12.1	13.6	-22.95	-130.9	372.9	392.5	369.2	23.27	16.870	
5,600.0	5,590.7	5,458.1	5,377.2	12.4	14.4	-24.21	-144.4	419.6	419.9	396.4	23.49	17.875	
5,700.0	5,685.1	5,554.6	5,460.2	12.7	15.2	-25.62	-158.1	466.7	443.0	419.2	23.72	18.673	
5,800.0	5,777.7	5,651.7	5,543.8	13.0	16.0	-27.19	-171.9	514.2	461.8	437.8	23.99	19.255	
5,900.0	5,868.1	5,749.2	5,627.8	13.4	16.9	-28.96	-185.8	561.9	476.6	452.3	24.31	19.606	
6,000.0	5,956.3	5,846.9	5,711.9	13.9	17.8	-30.96	-199.6	609.6	487.5	462.8	24.74	19.706	
6,100.0	6,042.8	5,944.5	5,795.9	14.5	18.7	-33.20	-213.5	657.3	496.4	470.9	25.57	19.418	
6,200.0	6,129.4	6,042.2	5,880.0	15.1	19.6	-35.38	-227.4	705.0	506.1	479.5	26.53	19.076	
6,300.0	6,216.0	6,139.8	5,964.0	15.8	20.6	-37.48	-241.2	752.7	516.5	488.9	27.60	18.713	
6,400.0	6,302.5	6,237.5	6,048.1	16.6	21.6	-39.50	-255.1	800.4	527.5	498.7	28.77	18.333	
6,500.0	6,389.1	6,335.1	6,132.1	17.3	22.6	-41.43	-268.9	848.1	539.2	509.2	30.05	17.943	
6,600.0	6,476.9	6,433.4	6,216.7	18.0	23.6	-29.84	-282.9	896.2	551.0	519.6	31.42	17.539	
6,700.0	6,568.2	6,532.4	6,302.0	18.6	24.6	-1.83	-296.9	944.6	560.6	528.5	32.13	17.450	
6,800.0	6,658.7	6,627.3	6,383.6	19.0	25.6	26.17	-310.4	990.9	568.5	536.3	32.14	17.686	
6,900.0	6,743.8	6,713.1	6,457.5	19.3	26.5	45.65	-322.6	1,032.9	577.3	545.4	31.92	18.085	
7,000.0	6,819.1	6,785.6	6,520.0	19.4	27.3	57.83	-332.9	1,068.3	591.6	559.7	31.90	18.546	
7,100.0	6,880.8	6,841.0	6,567.7	19.4	27.9	64.30	-340.8	1,095.4	615.4	583.3	32.14	19.150	
7,200.0	6,925.6	6,876.5	6,598.2	19.4	28.3	65.40	-345.8	1,112.7	651.3	618.9	32.42	20.090	
7,300.0	6,951.4	6,890.2	6,610.0	19.3	28.4	61.10	-347.7	1,119.4	698.9	666.7	32.17	21.722	
7,400.0	6,957.3	6,882.1	6,603.0	19.3	28.3	54.18	-346.6	1,115.5	755.1	723.9	31.15	24.239	
7,500.0	6,957.3	7,837.8	7,106.3	19.4	32.5	100.84	204.3	1,398.7	792.1	758.3	33.79	23.440	
7,600.0	6,957.3	7,937.8	7,106.3	19.6	32.5	100.84	304.3	1,398.3	792.4	757.4	35.02	22.627	
7,700.0	6,957.3	8,037.8	7,106.3	20.2	32.7	100.83	404.3	1,397.9	792.7	756.1	36.60	21.658	
7,800.0	6,957.3	8,137.8	7,106.3	21.0	32.9	100.83	504.3	1,397.6	792.9	754.4	38.49	20.601	
7,900.0	6,957.3	8,237.8	7,106.3	22.0	33.2	100.83	604.3	1,397.2	793.2	752.6	40.65	19.515	
8,000.0	6,957.3	8,337.8	7,106.3	23.2	33.6	100.82	704.3	1,396.8	793.5	750.5	43.03	18.440	
8,100.0	6,957.3	8,437.8	7,106.3	24.4	34.1	100.82	804.3	1,396.4	793.8	748.2	45.61	17.405	
8,200.0	6,957.3	8,537.8	7,106.3	25.8	34.7	100.82	904.3	1,396.0	794.1	745.7	48.34	16.426	
8,300.0	6,957.3	8,637.8	7,106.3	27.2	35.4	100.81	1,004.3	1,395.6	794.3	743.1	51.21	15.511	
8,400.0	6,957.3	8,737.8	7,106.3	28.7	36.3	100.81	1,104.3	1,395.2	794.6	740.4	54.20	14.662	
8,500.0	6,957.3	8,837.8	7,106.3	30.2	37.3	100.80	1,204.3	1,394.8	794.9	737.6	57.28	13.878	
8,600.0	6,957.3	8,937.8	7,106.3	31.8	38.3	100.80	1,304.3	1,394.4	795.2	734.7	60.44	13.157	
8,700.0	6,957.3	9,037.8	7,106.3	33.4	39.5	100.80	1,404.3	1,394.0	795.5	731.8	63.67	12.494	
8,800.0	6,957.3	9,137.8	7,106.3	35.1	40.7	100.79	1,504.3	1,393.6	795.7	728.8	66.96	11.885	
8,900.0	6,957.3	9,237.8	7,106.3	36.7	42.1	100.79	1,604.3	1,393.2	796.0	725.7	70.30	11.324	
9,000.0	6,957.3	9,337.8	7,106.3	38.4	43.5	100.78	1,704.3	1,392.8	796.3	722.6	73.68	10.808	
9,100.0	6,957.3	9,437.8	7,106.3	40.1	44.9	100.78	1,804.3	1,392.4	796.6	719.5	77.10	10.332	
9,200.0	6,957.3	9,537.8	7,106.3	41.9	46.4	100.78	1,904.3	1,392.0	796.9	716.3	80.56	9.892	
9,300.0	6,957.3	9,637.8	7,106.3	43.6	47.9	100.77	2,004.3	1,391.6	797.1	713.1	84.04	9.485	
9,400.0	6,957.3	9,737.8	7,106.3	45.4	49.5	100.77	2,104.3	1,391.2	797.4	709.9	87.55	9.108	
9,500.0	6,957.3	9,837.8	7,106.3	47.2	51.1	100.77	2,204.3	1,390.8	797.7	706.6	91.08	8.758	
9,600.0	6,957.3	9,937.8	7,106.3	48.9	52.7	100.76	2,304.3	1,390.4	798.0	703.3	94.64	8.432	
9,700.0	6,957.3	10,037.8	7,106.3	50.7	54.4	100.76	2,404.3	1,390.0	798.3	700.0	98.21	8.128	
9,800.0	6,957.3	10,137.8	7,106.3	52.5	56.0	100.75	2,504.3	1,389.6	798.5	696.7	101.80	7.844	
9,900.0	6,957.3	10,237.8	7,106.3	54.4	57.7	100.75	2,604.3	1,389.3	798.8	693.4	105.40	7.579	
10,000.0	6,957.3	10,337.8	7,106.3	56.2	59.4	100.75	2,704.3	1,388.9	799.1	690.1	109.01	7.330	
10,100.0	6,957.3	10,437.8	7,106.3	58.0	61.1	100.74	2,804.3	1,388.5	799.4	686.7	112.64	7.097	
10,200.0	6,957.3	10,537.8	7,106.3	59.8	62.9	100.74	2,904.3	1,388.1	799.7	683.4	116.28	6.877	
10,300.0	6,957.3	10,637.8	7,106.3	61.7	64.6	100.73	3,004.3	1,387.7	799.9	680.0	119.92	6.670	

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 Bruegman South EG 34-024HN
<b>Project:</b>	SEC.34-T7N-R64W	<b>TVD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Reference Site:</b>	Bruegman Pad Sec.34-T7N-R64W	<b>MD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Bruegman South EG 34-024HN	<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 (11-1-13)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Bruegman Pad Sec.34-T7N-R64W - Bruegman South EG 34-027HC - Wellbore #1 - Plan #1 (11-1-13)												<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	6,957.3	10,737.8	7,106.3	63.5	66.4	100.73	3,104.3	1,387.3	800.2	676.6	123.58	6.475	
10,500.0	6,957.3	10,837.8	7,106.3	65.4	68.1	100.73	3,204.3	1,386.9	800.5	673.3	127.25	6.291	
10,600.0	6,957.3	10,937.8	7,106.3	67.2	69.9	100.72	3,304.3	1,386.5	800.8	669.9	130.92	6.117	
10,700.0	6,957.3	11,037.8	7,106.3	69.1	71.7	100.72	3,404.3	1,386.1	801.1	666.5	134.60	5.952	
10,800.0	6,957.3	11,137.8	7,106.3	70.9	73.5	100.72	3,504.3	1,385.7	801.3	663.1	138.28	5.795	
10,900.0	6,957.3	11,237.8	7,106.3	72.8	75.3	100.71	3,604.3	1,385.3	801.6	659.6	141.97	5.646	
11,000.0	6,957.3	11,337.8	7,106.3	74.7	77.1	100.71	3,704.3	1,384.9	801.9	656.2	145.67	5.505	
11,100.0	6,957.3	11,437.7	7,106.3	76.5	78.9	100.70	3,804.3	1,384.5	802.2	652.8	149.37	5.370	
11,200.0	6,957.3	11,537.7	7,106.3	78.4	80.7	100.70	3,904.3	1,384.1	802.5	649.4	153.08	5.242	
11,300.0	6,957.3	11,637.7	7,106.3	80.3	82.6	100.70	4,004.3	1,383.7	802.7	645.9	156.79	5.120	
11,400.0	6,957.3	11,737.7	7,106.3	82.2	84.4	100.69	4,104.3	1,383.3	803.0	642.5	160.50	5.003	
11,500.0	6,957.3	11,837.7	7,106.3	84.0	86.2	100.69	4,204.3	1,382.9	803.3	639.1	164.22	4.892	
11,600.0	6,957.3	11,937.7	7,106.3	85.9	88.1	100.69	4,304.3	1,382.5	803.6	635.6	167.94	4.785	
11,700.0	6,957.3	12,037.7	7,106.3	87.8	89.9	100.68	4,404.3	1,382.1	803.9	632.2	171.66	4.683	
11,723.2	6,957.3	12,060.9	7,106.3	88.2	90.3	100.68	4,427.5	1,382.0	803.9	631.4	172.53	4.660	



<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Bruegman South EG 34-024HN
<b>Project:</b>	SEC.34-T7N-R64W	<b>TVD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Reference Site:</b>	Bruegman Pad Sec.34-T7N-R64W	<b>MD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Bruegman South EG 34-024HN	<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 (11-1-13)	<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	127.30	-18.2	23.9	30.1				
100.0	100.0	100.0	100.0	0.1	0.1	127.30	-18.2	23.9	30.1	29.8	0.22	133.729	
200.0	200.0	200.0	200.0	0.3	0.3	127.30	-18.2	23.9	30.1	29.4	0.67	44.576	
300.0	300.0	300.0	300.0	0.6	0.6	127.30	-18.2	23.9	30.1	28.9	1.12	26.746	
400.0	400.0	400.0	400.0	0.8	0.8	127.30	-18.2	23.9	30.1	28.5	1.57	19.104	
500.0	500.0	500.0	500.0	1.0	1.0	127.30	-18.2	23.9	30.1	28.0	2.02	14.859	
600.0	600.0	600.0	600.0	1.2	1.2	127.30	-18.2	23.9	30.1	27.6	2.47	12.157	
700.0	700.0	700.0	700.0	1.5	1.5	127.30	-18.2	23.9	30.1	27.1	2.92	10.287	
800.0	800.0	800.0	800.0	1.7	1.7	127.30	-18.2	23.9	30.1	26.7	3.37	8.915	
900.0	900.0	900.0	900.0	1.9	1.9	127.30	-18.2	23.9	30.1	26.2	3.82	7.866	
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	127.30	-18.2	23.9	30.1	25.8	4.27	7.038	
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	127.30	-18.2	23.9	30.1	25.3	4.72	6.368	
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	127.30	-18.2	23.9	30.1	24.9	5.17	5.814	
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	127.30	-18.2	23.9	30.1	24.4	5.62	5.349	
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	127.30	-18.2	23.9	30.1	24.0	6.07	4.953	
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	127.30	-18.2	23.9	30.1	23.5	6.52	4.611	
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	127.30	-18.2	23.9	30.1	23.1	6.97	4.314	
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	127.30	-18.2	23.9	30.1	22.6	7.42	4.052	
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	127.30	-18.2	23.9	30.1	22.2	7.87	3.821	
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	127.30	-18.2	23.9	30.1	21.7	8.32	3.614	
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	127.30	-18.2	23.9	30.1	21.3	8.77	3.429	
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	127.30	-18.2	23.9	30.1	20.8	9.22	3.262	
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	127.30	-18.2	23.9	30.1	20.4	9.66	3.110	
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	127.30	-18.2	23.9	30.1	19.9	10.11	2.972	
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	127.30	-18.2	23.9	30.1	19.5	10.56	2.845	
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	127.30	-18.2	23.9	30.1	19.0	11.01	2.729	
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	127.30	-18.2	23.9	30.1	18.6	11.46	2.622	
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	127.30	-18.2	23.9	30.1	18.1	11.91	2.523	
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	127.30	-18.2	23.9	30.1	17.7	12.36	2.431	
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	127.30	-18.2	23.9	30.1	17.2	12.81	2.346	
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	127.30	-18.2	23.9	30.1	16.8	13.26	2.267	
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	127.30	-18.2	23.9	30.1	16.3	13.71	2.192	
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	127.30	-18.2	23.9	30.1	15.9	14.16	2.123	
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	127.30	-18.2	23.9	30.1	15.4	14.61	2.057	
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	127.30	-18.2	23.9	30.1	15.0	15.06	1.996	
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	127.30	-18.2	23.9	30.1	14.5	15.51	1.938	
3,600.0	3,600.0	3,600.0	3,600.0	8.0	8.0	127.30	-18.2	23.9	30.1	14.1	15.96	1.884	
3,700.0	3,700.0	3,700.0	3,700.0	8.2	8.2	127.30	-18.2	23.9	30.1	13.6	16.41	1.832	
3,800.0	3,800.0	3,800.0	3,800.0	8.4	8.4	127.30	-18.2	23.9	30.1	13.2	16.86	1.783	
3,900.0	3,900.0	3,900.0	3,900.0	8.7	8.7	127.30	-18.2	23.9	30.1	12.8	17.31	1.737	
4,000.0	4,000.0	4,000.0	4,000.0	8.9	8.9	127.30	-18.2	23.9	30.1	12.3	17.76	1.693	
4,100.0	4,100.0	4,100.0	4,100.0	9.1	9.1	127.30	-18.2	23.9	30.1	11.9	18.21	1.651	
4,200.0	4,200.0	4,200.0	4,200.0	9.3	9.3	127.30	-18.2	23.9	30.1	11.4	18.66	1.611	
4,300.0	4,300.0	4,300.0	4,300.0	9.6	9.6	127.30	-18.2	23.9	30.1	11.0	19.11	1.573	
4,400.0	4,400.0	4,400.0	4,400.0	9.8	9.8	127.30	-18.2	23.9	30.1	10.5	19.55	1.537	
4,433.4	4,433.4	4,433.4	4,433.4	9.9	9.9	127.30	-18.2	23.9	30.1	10.4	19.70	1.525 CC, ES, SF	
4,500.0	4,500.0	4,499.0	4,499.0	10.0	10.0	126.85	-18.5	24.7	30.9	10.9	19.99	1.544	
4,600.0	4,600.0	4,596.5	4,596.3	10.2	10.2	123.93	-20.8	30.9	37.5	17.1	20.40	1.836	
4,700.0	4,700.0	4,692.7	4,691.6	10.5	10.4	120.40	-25.3	43.2	50.7	29.9	20.82	2.437	
4,800.0	4,800.0	4,786.8	4,783.7	10.7	10.6	117.63	-31.9	60.9	70.6	49.4	21.25	3.324	
4,900.0	4,900.0	4,877.9	4,871.6	10.9	10.8	115.72	-40.2	83.4	96.9	75.2	21.68	4.468	
5,000.0	5,000.0	4,965.7	4,954.6	11.1	11.1	114.45	-50.0	110.1	129.1	107.0	22.13	5.834	

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

Bruegman Pad Sec.34-T7N-R64W - Bruegman South EG 34-027HN - Wellbore #1 - Plan #1 (11-1-13)										Offset Site Error:		0.0 ft	
Survey Program: 0-MWD										Offset Well Error:		0.0 ft	
Reference		Offset		Semi Major Axis			Distance						
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.0	5,100.0	5,050.3	5,032.8	11.3	11.4	-17.38	-61.2	140.2	165.2	142.8	22.36	7.387	
5,200.0	5,199.7	5,132.6	5,107.0	11.5	11.7	-18.21	-73.5	173.6	202.1	179.4	22.64	8.926	
5,300.0	5,298.9	5,213.3	5,177.6	11.7	12.1	-19.05	-87.0	210.2	239.7	216.8	22.87	10.481	
5,400.0	5,397.3	5,306.5	5,258.1	11.9	12.6	-20.09	-103.4	254.4	275.2	252.1	23.10	11.916	
5,500.0	5,494.6	5,401.3	5,339.9	12.1	13.3	-21.22	-120.0	299.4	306.3	283.0	23.30	13.144	
5,600.0	5,590.7	5,497.3	5,422.7	12.4	14.0	-22.47	-136.8	345.0	332.9	309.4	23.51	14.162	
5,700.0	5,685.1	5,594.3	5,506.4	12.7	14.7	-23.88	-153.8	391.0	355.0	331.3	23.72	14.970	
5,800.0	5,777.7	5,692.1	5,590.7	13.0	15.5	-25.47	-170.9	437.4	372.8	348.9	23.96	15.561	
5,900.0	5,868.1	5,790.2	5,675.4	13.4	16.3	-27.29	-188.1	484.0	386.3	362.1	24.26	15.923	
6,000.0	5,956.3	5,888.6	5,760.2	13.9	17.2	-29.38	-205.3	530.6	395.8	371.1	24.67	16.041	
6,100.0	6,042.8	5,986.9	5,845.1	14.5	18.1	-31.71	-222.6	577.3	403.1	377.6	25.50	15.808	
6,200.0	6,129.4	6,085.3	5,929.9	15.1	19.0	-33.98	-239.8	624.0	411.0	384.6	26.47	15.529	
6,300.0	6,216.0	6,183.6	6,014.8	15.8	20.0	-36.16	-257.0	670.6	419.6	392.1	27.55	15.231	
6,400.0	6,302.5	6,282.0	6,099.6	16.6	20.9	-38.24	-274.3	717.3	428.8	400.1	28.74	14.920	
6,500.0	6,389.1	6,380.3	6,184.4	17.3	21.9	-40.24	-291.5	763.9	438.5	408.5	30.03	14.601	
6,600.0	6,476.9	6,479.2	6,269.7	18.0	22.9	-28.43	-308.8	810.9	448.4	417.0	31.37	14.295	
6,700.0	6,568.2	6,578.0	6,355.0	18.6	23.9	0.30	-326.1	857.8	456.6	424.6	31.96	14.285	
6,800.0	6,658.7	6,672.0	6,436.1	19.0	24.9	29.25	-342.6	902.3	464.3	432.4	31.91	14.549	
6,900.0	6,743.8	6,757.2	6,509.6	19.3	25.8	49.62	-357.5	942.8	475.3	443.6	31.76	14.967	
7,000.0	6,819.1	6,853.3	6,593.5	19.4	26.6	63.45	-362.0	988.9	492.8	461.0	31.82	15.486	
7,100.0	6,880.8	6,970.2	6,693.8	19.4	27.4	73.55	-339.6	1,043.8	515.5	483.4	32.10	16.062	
7,200.0	6,925.6	7,123.1	6,811.1	19.4	28.2	81.83	-266.6	1,107.7	540.0	507.5	32.42	16.656	
7,300.0	6,951.4	7,331.3	6,922.5	19.3	28.6	88.20	-103.9	1,167.9	559.2	526.4	32.81	17.040	
7,400.0	6,957.3	7,545.1	6,957.3	19.3	28.7	90.00	104.4	1,185.9	564.4	530.6	33.81	16.691	
7,500.0	6,957.3	7,645.1	6,957.3	19.4	28.7	90.00	204.4	1,185.3	564.5	529.9	34.67	16.282	
7,600.0	6,957.3	7,745.1	6,957.3	19.6	28.7	90.00	304.4	1,184.7	564.6	528.7	35.97	15.700	
7,700.0	6,957.3	7,845.1	6,957.3	20.2	28.9	90.00	404.4	1,184.2	564.8	527.2	37.61	15.016	
7,800.0	6,957.3	7,945.1	6,957.3	21.0	29.2	90.00	504.4	1,183.6	564.9	525.3	39.56	14.278	
7,900.0	6,957.3	8,045.1	6,957.3	22.0	29.5	90.00	604.4	1,183.1	565.0	523.2	41.78	13.523	
8,000.0	6,957.3	8,145.1	6,957.3	23.2	30.0	90.00	704.4	1,182.5	565.2	520.9	44.22	12.779	
8,100.0	6,957.3	8,245.1	6,957.3	24.4	30.6	90.00	804.4	1,182.0	565.3	518.4	46.86	12.064	
8,200.0	6,957.3	8,345.1	6,957.3	25.8	31.4	90.00	904.4	1,181.4	565.4	515.8	49.65	11.388	
8,300.0	6,957.3	8,445.1	6,957.3	27.2	32.3	90.00	1,004.4	1,180.9	565.5	513.0	52.57	10.757	
8,400.0	6,957.3	8,545.1	6,957.3	28.7	33.3	90.00	1,104.4	1,180.3	565.7	510.0	55.61	10.171	
8,500.0	6,957.3	8,645.1	6,957.3	30.2	34.5	90.00	1,204.4	1,179.8	565.8	507.0	58.75	9.631	
8,600.0	6,957.3	8,745.1	6,957.3	31.8	35.7	90.00	1,304.4	1,179.2	565.9	503.9	61.96	9.133	
8,700.0	6,957.3	8,845.1	6,957.3	33.4	37.0	90.00	1,404.4	1,178.7	566.0	500.8	65.25	8.675	
8,800.0	6,957.3	8,945.1	6,957.3	35.1	38.4	90.00	1,504.4	1,178.1	566.2	497.6	68.59	8.254	
8,900.0	6,957.3	9,045.1	6,957.3	36.7	39.9	90.00	1,604.4	1,177.5	566.3	494.3	71.98	7.867	
9,000.0	6,957.3	9,145.1	6,957.3	38.4	41.4	90.00	1,704.3	1,177.0	566.4	491.0	75.42	7.510	
9,100.0	6,957.3	9,245.1	6,957.3	40.1	43.0	90.00	1,804.3	1,176.4	566.5	487.6	78.90	7.181	
9,200.0	6,957.3	9,345.1	6,957.3	41.9	44.5	90.00	1,904.3	1,175.9	566.7	484.3	82.41	6.876	
9,300.0	6,957.3	9,445.1	6,957.3	43.6	46.2	90.00	2,004.3	1,175.3	566.8	480.8	85.95	6.595	
9,400.0	6,957.3	9,545.1	6,957.3	45.4	47.8	90.00	2,104.3	1,174.8	566.9	477.4	89.51	6.334	
9,500.0	6,957.3	9,645.1	6,957.3	47.2	49.5	90.00	2,204.3	1,174.2	567.0	473.9	93.10	6.091	
9,600.0	6,957.3	9,745.1	6,957.3	48.9	51.2	90.00	2,304.3	1,173.7	567.2	470.5	96.70	5.865	
9,700.0	6,957.3	9,845.1	6,957.3	50.7	52.9	90.00	2,404.3	1,173.1	567.3	467.0	100.33	5.654	
9,800.0	6,957.3	9,945.1	6,957.3	52.5	54.6	90.00	2,504.3	1,172.6	567.4	463.4	103.97	5.457	
9,900.0	6,957.3	10,045.1	6,957.3	54.4	56.3	90.00	2,604.3	1,172.0	567.5	459.9	107.63	5.273	
10,000.0	6,957.3	10,145.1	6,957.3	56.2	58.1	90.00	2,704.3	1,171.4	567.7	456.4	111.30	5.100	
10,100.0	6,957.3	10,245.1	6,957.3	58.0	59.8	90.00	2,804.3	1,170.9	567.8	452.8	114.98	4.938	
10,200.0	6,957.3	10,345.1	6,957.3	59.8	61.6	90.00	2,904.3	1,170.3	567.9	449.3	118.67	4.786	

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Bruegman South EG 34-024HN
<b>Project:</b>	SEC.34-T7N-R64W	<b>TVD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Reference Site:</b>	Bruegman Pad Sec.34-T7N-R64W	<b>MD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Bruegman South EG 34-024HN	<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 (11-1-13)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Bruegman Pad Sec.34-T7N-R64W - Bruegman South EG 34-027HN - Wellbore #1 - Plan #1 (11-1-13)												<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	6,957.3	10,445.1	6,957.3	61.7	63.4	90.00	3,004.3	1,169.8	568.0	445.7	122.37	4.642	
10,400.0	6,957.3	10,545.1	6,957.3	63.5	65.2	90.00	3,104.3	1,169.2	568.2	442.1	126.08	4.506	
10,500.0	6,957.3	10,645.1	6,957.3	65.4	67.0	90.00	3,204.3	1,168.7	568.3	438.5	129.80	4.378	
10,600.0	6,957.3	10,745.1	6,957.3	67.2	68.8	90.00	3,304.3	1,168.1	568.4	434.9	133.53	4.257	
10,700.0	6,957.3	10,845.1	6,957.3	69.1	70.6	90.00	3,404.3	1,167.6	568.6	431.3	137.26	4.142	
10,800.0	6,957.3	10,945.1	6,957.3	70.9	72.4	90.00	3,504.3	1,167.0	568.7	427.7	141.00	4.033	
10,900.0	6,957.3	11,045.1	6,957.3	72.8	74.3	90.00	3,604.3	1,166.5	568.8	424.1	144.75	3.930	
11,000.0	6,957.3	11,145.1	6,957.3	74.7	76.1	90.00	3,704.3	1,165.9	568.9	420.4	148.50	3.831	
11,100.0	6,957.3	11,245.1	6,957.3	76.5	77.9	90.00	3,804.3	1,165.3	569.1	416.8	152.26	3.737	
11,200.0	6,957.3	11,345.1	6,957.3	78.4	79.8	90.00	3,904.3	1,164.8	569.2	413.2	156.02	3.648	
11,300.0	6,957.3	11,445.1	6,957.3	80.3	81.6	90.00	4,004.3	1,164.2	569.3	409.5	159.78	3.563	
11,400.0	6,957.3	11,545.1	6,957.3	82.2	83.4	90.00	4,104.3	1,163.7	569.4	405.9	163.55	3.482	
11,500.0	6,957.3	11,645.1	6,957.3	84.0	85.3	90.00	4,204.3	1,163.1	569.6	402.2	167.32	3.404	
11,600.0	6,957.3	11,745.1	6,957.3	85.9	87.2	90.00	4,304.3	1,162.6	569.7	398.6	171.10	3.330	
11,700.0	6,957.3	11,845.1	6,957.3	87.8	89.0	90.00	4,404.3	1,162.0	569.8	394.9	174.88	3.258	
11,723.2	6,957.3	11,868.3	6,957.3	88.2	89.4	90.00	4,427.5	1,161.9	569.8	394.1	175.76	3.242	

<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Bruegman South EG 34-024HN
<b>Project:</b>	SEC.34-T7N-R64W	<b>TVD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Reference Site:</b>	Bruegman Pad Sec.34-T7N-R64W	<b>MD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Bruegman South EG 34-024HN	<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 (11-1-13)	<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	127.30	-54.6	71.7	90.2					
100.0	100.0	100.0	100.0	0.1	0.1	127.30	-54.6	71.7	90.2	89.9	0.22	401.187		
200.0	200.0	200.0	200.0	0.3	0.3	127.30	-54.6	71.7	90.2	89.5	0.67	133.729		
300.0	300.0	300.0	300.0	0.6	0.6	127.30	-54.6	71.7	90.2	89.0	1.12	80.237		
400.0	400.0	400.0	400.0	0.8	0.8	127.30	-54.6	71.7	90.2	88.6	1.57	57.312		
500.0	500.0	500.0	500.0	1.0	1.0	127.30	-54.6	71.7	90.2	88.2	2.02	44.576		
600.0	600.0	600.0	600.0	1.2	1.2	127.30	-54.6	71.7	90.2	87.7	2.47	36.472		
700.0	700.0	700.0	700.0	1.5	1.5	127.30	-54.6	71.7	90.2	87.3	2.92	30.861		
800.0	800.0	800.0	800.0	1.7	1.7	127.30	-54.6	71.7	90.2	86.8	3.37	26.746		
900.0	900.0	900.0	900.0	1.9	1.9	127.30	-54.6	71.7	90.2	86.4	3.82	23.599		
1,000.0	1,000.0	1,000.0	1,000.0	2.1	2.1	127.30	-54.6	71.7	90.2	85.9	4.27	21.115		
1,100.0	1,100.0	1,100.0	1,100.0	2.4	2.4	127.30	-54.6	71.7	90.2	85.5	4.72	19.104		
1,200.0	1,200.0	1,200.0	1,200.0	2.6	2.6	127.30	-54.6	71.7	90.2	85.0	5.17	17.443		
1,300.0	1,300.0	1,300.0	1,300.0	2.8	2.8	127.30	-54.6	71.7	90.2	84.6	5.62	16.047		
1,400.0	1,400.0	1,400.0	1,400.0	3.0	3.0	127.30	-54.6	71.7	90.2	84.1	6.07	14.859		
1,500.0	1,500.0	1,500.0	1,500.0	3.3	3.3	127.30	-54.6	71.7	90.2	83.7	6.52	13.834		
1,600.0	1,600.0	1,600.0	1,600.0	3.5	3.5	127.30	-54.6	71.7	90.2	83.2	6.97	12.942		
1,700.0	1,700.0	1,700.0	1,700.0	3.7	3.7	127.30	-54.6	71.7	90.2	82.8	7.42	12.157		
1,800.0	1,800.0	1,800.0	1,800.0	3.9	3.9	127.30	-54.6	71.7	90.2	82.3	7.87	11.462		
1,900.0	1,900.0	1,900.0	1,900.0	4.2	4.2	127.30	-54.6	71.7	90.2	81.9	8.32	10.843		
2,000.0	2,000.0	2,000.0	2,000.0	4.4	4.4	127.30	-54.6	71.7	90.2	81.4	8.77	10.287		
2,100.0	2,100.0	2,100.0	2,100.0	4.6	4.6	127.30	-54.6	71.7	90.2	81.0	9.22	9.785		
2,200.0	2,200.0	2,200.0	2,200.0	4.8	4.8	127.30	-54.6	71.7	90.2	80.5	9.66	9.330		
2,300.0	2,300.0	2,300.0	2,300.0	5.1	5.1	127.30	-54.6	71.7	90.2	80.1	10.11	8.915		
2,400.0	2,400.0	2,400.0	2,400.0	5.3	5.3	127.30	-54.6	71.7	90.2	79.6	10.56	8.536		
2,500.0	2,500.0	2,500.0	2,500.0	5.5	5.5	127.30	-54.6	71.7	90.2	79.2	11.01	8.187		
2,600.0	2,600.0	2,600.0	2,600.0	5.7	5.7	127.30	-54.6	71.7	90.2	78.7	11.46	7.866		
2,700.0	2,700.0	2,700.0	2,700.0	6.0	6.0	127.30	-54.6	71.7	90.2	78.3	11.91	7.570		
2,800.0	2,800.0	2,800.0	2,800.0	6.2	6.2	127.30	-54.6	71.7	90.2	77.8	12.36	7.294		
2,900.0	2,900.0	2,900.0	2,900.0	6.4	6.4	127.30	-54.6	71.7	90.2	77.4	12.81	7.038		
3,000.0	3,000.0	3,000.0	3,000.0	6.6	6.6	127.30	-54.6	71.7	90.2	76.9	13.26	6.800		
3,100.0	3,100.0	3,100.0	3,100.0	6.9	6.9	127.30	-54.6	71.7	90.2	76.5	13.71	6.577		
3,200.0	3,200.0	3,200.0	3,200.0	7.1	7.1	127.30	-54.6	71.7	90.2	76.0	14.16	6.368		
3,300.0	3,300.0	3,300.0	3,300.0	7.3	7.3	127.30	-54.6	71.7	90.2	75.6	14.61	6.172		
3,400.0	3,400.0	3,400.0	3,400.0	7.5	7.5	127.30	-54.6	71.7	90.2	75.1	15.06	5.988		
3,500.0	3,500.0	3,500.0	3,500.0	7.8	7.8	127.30	-54.6	71.7	90.2	74.7	15.51	5.814 CC, ES		
3,600.0	3,600.0	3,595.8	3,595.8	8.0	8.0	126.66	-55.1	74.1	92.4	76.5	15.93	5.802 SF		
3,700.0	3,700.0	3,691.2	3,690.9	8.2	8.1	124.93	-56.6	81.1	99.3	83.0	16.35	6.075		
3,800.0	3,800.0	3,785.6	3,784.5	8.4	8.3	122.53	-59.0	92.6	110.9	94.1	16.77	6.614		
3,900.0	3,900.0	3,878.6	3,876.1	8.7	8.5	119.93	-62.4	108.3	127.3	110.1	17.20	7.400		
4,000.0	4,000.0	3,969.8	3,965.1	8.9	8.8	117.46	-66.5	128.0	148.4	130.8	17.64	8.413		
4,100.0	4,100.0	4,058.9	4,051.0	9.1	9.0	115.28	-71.4	151.2	174.2	156.1	18.10	9.626		
4,200.0	4,200.0	4,145.6	4,133.4	9.3	9.3	113.44	-76.9	177.5	204.6	186.0	18.58	11.011		
4,300.0	4,300.0	4,229.6	4,212.0	9.6	9.6	111.92	-83.1	206.4	239.3	220.2	19.08	12.540		
4,400.0	4,400.0	4,310.7	4,286.6	9.8	10.0	110.67	-89.6	237.6	278.1	258.5	19.61	14.184		
4,500.0	4,500.0	4,388.8	4,357.1	10.0	10.4	109.65	-96.6	270.5	320.8	300.6	20.16	15.911		
4,600.0	4,600.0	4,463.9	4,423.5	10.2	10.9	108.81	-103.8	304.7	367.1	346.4	20.75	17.694		
4,700.0	4,700.0	4,541.2	4,490.5	10.5	11.4	108.07	-111.7	342.4	416.7	395.3	21.38	19.490		
4,800.0	4,800.0	4,627.6	4,565.1	10.7	12.0	107.41	-120.7	385.1	467.0	444.9	22.09	21.136		
4,900.0	4,900.0	4,713.9	4,639.6	10.9	12.7	106.87	-129.7	427.7	517.3	494.5	22.84	22.653		
5,000.0	5,000.0	4,800.2	4,714.1	11.1	13.5	106.43	-138.7	470.4	567.7	544.0	23.60	24.049		
5,100.0	5,100.0	4,887.4	4,789.4	11.3	14.2	-24.46	-147.8	513.5	616.4	594.3	22.04	27.967		

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

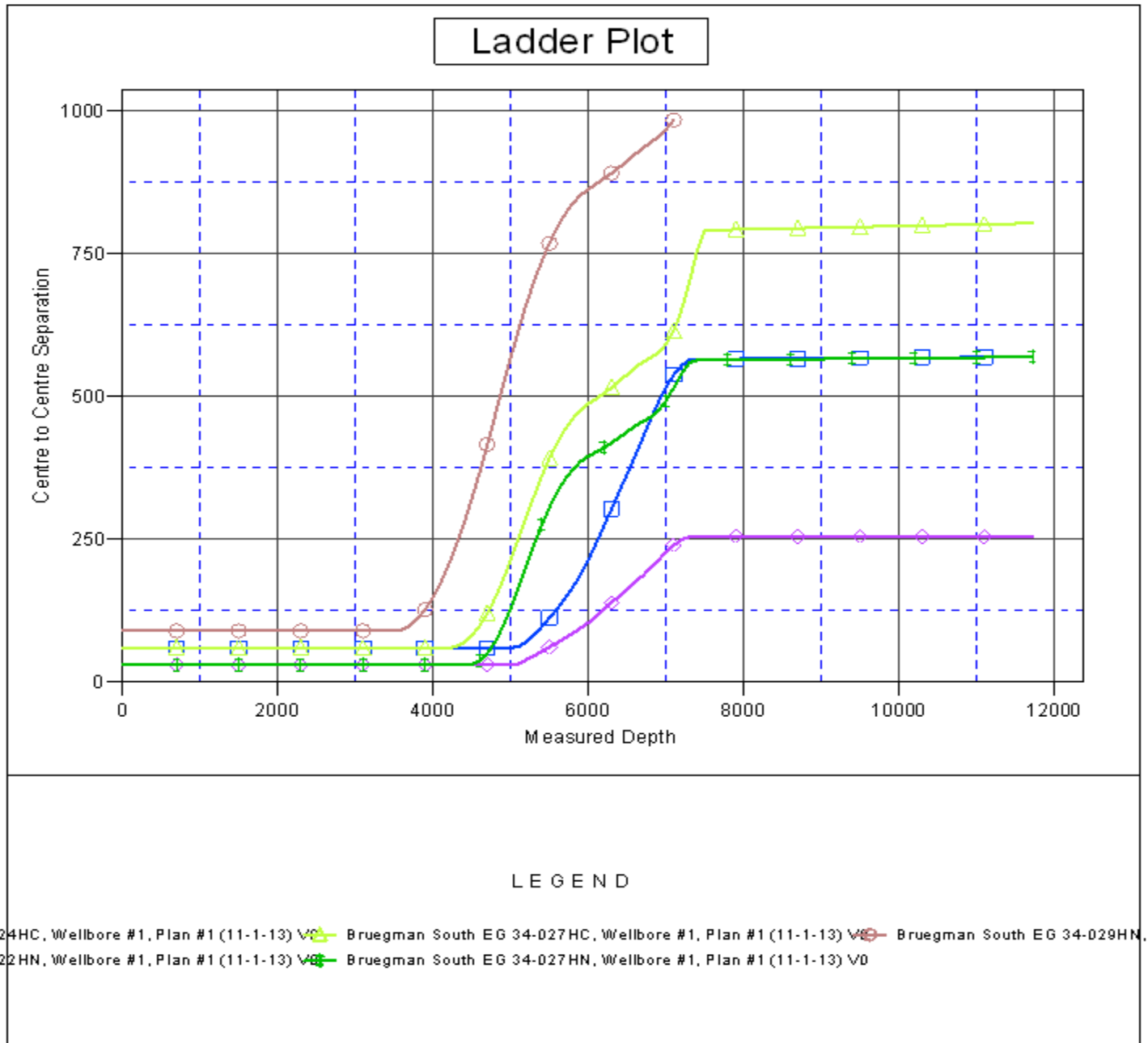
<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Bruegman South EG 34-024HN
<b>Project:</b>	SEC.34-T7N-R64W	<b>TVD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Reference Site:</b>	Bruegman Pad Sec.34-T7N-R64W	<b>MD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Bruegman South EG 34-024HN	<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 (11-1-13)	<b>Offset TVD Reference:</b>	Offset Datum

<b>Offset Design</b> Bruegman Pad Sec.34-T7N-R64W - Bruegman South EG 34-029HN - Wellbore #1 - Plan #1 (11-1-13)												<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
5,200.0	5,199.7	4,976.7	4,866.5	11.5	15.1	-24.45	-157.1	557.6	660.9	638.5	22.42	29.472	
5,300.0	5,298.9	5,067.9	4,945.2	11.7	15.9	-24.63	-166.6	602.6	701.2	678.4	22.79	30.770	
5,400.0	5,397.3	5,160.7	5,025.2	11.9	16.8	-24.98	-176.2	648.4	737.2	714.1	23.13	31.870	
5,500.0	5,494.6	5,254.8	5,106.5	12.1	17.7	-25.48	-186.0	694.9	769.0	745.5	23.46	32.777	
5,600.0	5,590.7	5,349.9	5,188.6	12.4	18.7	-26.14	-196.0	741.9	796.4	772.6	23.78	33.493	
5,700.0	5,685.1	5,445.9	5,271.5	12.7	19.7	-26.95	-206.0	789.4	819.5	795.4	24.10	34.009	
5,800.0	5,777.7	5,542.5	5,354.9	13.0	20.6	-27.91	-216.0	837.1	838.4	814.0	24.43	34.314	
5,900.0	5,868.1	5,639.4	5,438.5	13.4	21.7	-29.03	-226.1	884.9	853.2	828.4	24.81	34.384	
6,000.0	5,956.3	5,736.3	5,522.1	13.9	22.7	-30.32	-236.2	932.8	864.0	838.7	25.27	34.193	
6,100.0	6,042.8	5,833.1	5,605.7	14.5	23.7	-31.82	-246.3	980.6	872.6	846.6	26.05	33.495	
6,200.0	6,129.4	5,929.9	5,689.2	15.1	24.7	-33.31	-256.4	1,028.4	881.9	854.9	26.95	32.727	
6,300.0	6,216.0	6,026.7	5,772.8	15.8	25.8	-34.77	-266.5	1,076.2	891.7	863.8	27.92	31.937	
6,400.0	6,302.5	6,123.5	5,856.3	16.6	26.8	-36.19	-276.5	1,124.0	902.2	873.2	28.98	31.134	
6,500.0	6,389.1	6,220.3	5,939.9	17.3	27.8	-37.59	-286.6	1,171.9	913.2	883.1	30.11	30.323	
6,600.0	6,476.9	6,317.9	6,024.2	18.0	28.9	-25.70	-296.8	1,220.1	924.6	893.2	31.43	29.417	
6,700.0	6,568.2	6,417.1	6,109.8	18.6	30.0	1.55	-307.1	1,269.1	935.3	902.9	32.38	28.881	
6,800.0	6,658.7	6,512.9	6,192.5	19.0	31.0	27.92	-317.1	1,316.4	945.1	912.3	32.78	28.830	
6,900.0	6,743.8	6,600.6	6,268.2	19.3	32.0	45.42	-326.2	1,359.7	955.1	922.2	32.84	29.081	
7,000.0	6,819.1	6,675.6	6,333.0	19.4	32.8	55.90	-334.0	1,396.8	967.6	934.7	32.88	29.432	
7,100.0	6,880.8	6,734.1	6,383.5	19.4	33.5	61.59	-340.1	1,425.7	985.2	952.2	33.03	29.825	

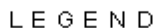
<b>Company:</b>	Great Western	<b>Local Co-ordinate Reference:</b>	Well Bruegman South EG 34-024HN
<b>Project:</b>	SEC.34-T7N-R64W	<b>TVD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Reference Site:</b>	Bruegman Pad Sec.34-T7N-R64W	<b>MD Reference:</b>	WELL @ 4861.3ft (RKB - 16.5')
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Bruegman South EG 34-024HN	<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 (11-1-13)	<b>Offset TVD Reference:</b>	Offset Datum




Reference Depths are relative to WELL @ 4861.3ft (RKB - 16.5')  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000 °

Coordinates are relative to: Bruegman South EG 34-024HN  
Coordinate System is US State Plane 1983, Colorado Northern Zone  
Grid Convergence at Surface is: 0.62°



Reference Depths are relative to WELL @ 4861.3ft (RKB - 16.5')	Coordinates are relative to: Bruegman South EG 34-024HN
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: 0.62°



024HC, Wellbore #1, Plan #1 (11-1-13) VD  Bruegman South EG 34-027HC, Wellbore #1, Plan #1 (11-1-13) VD  Bruegman South EG 34-029HN, Wellbore #1, Plan #1 (11-1-13) VD   
022HN, Wellbore #1, Plan #1 (11-1-13) VD  Bruegman South EG 34-027HN, Wellbore #1, Plan #1 (11-1-13) VD 