

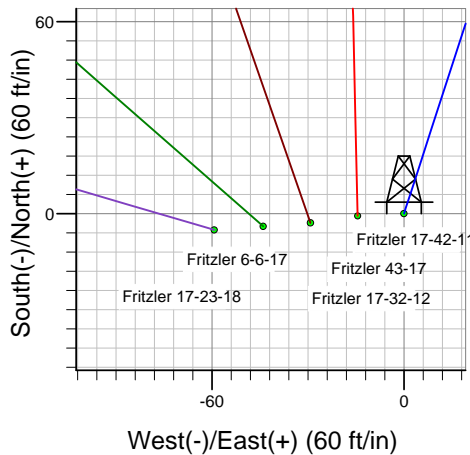
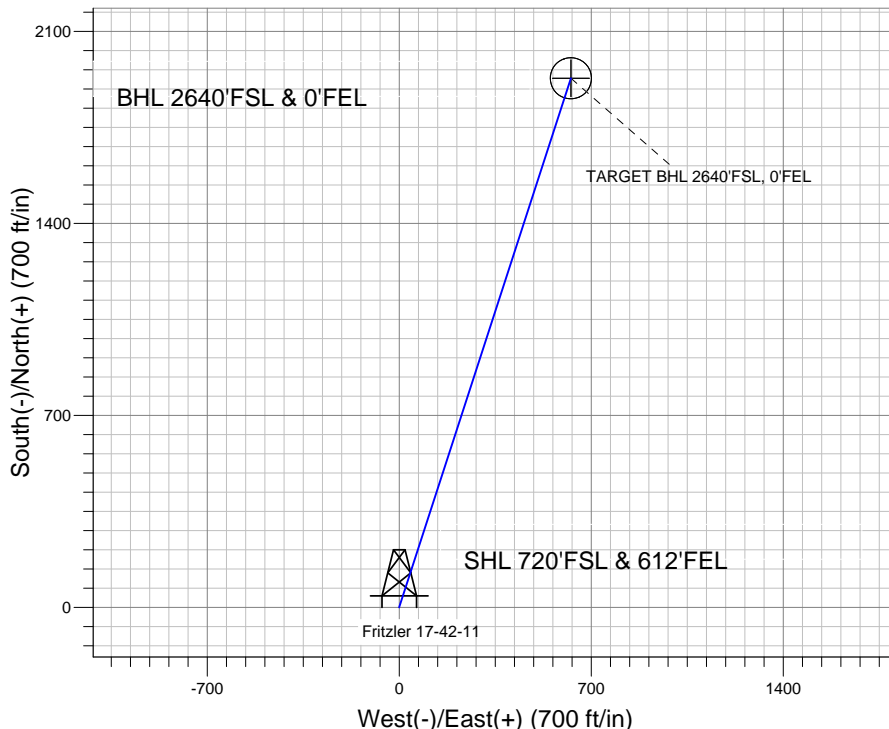
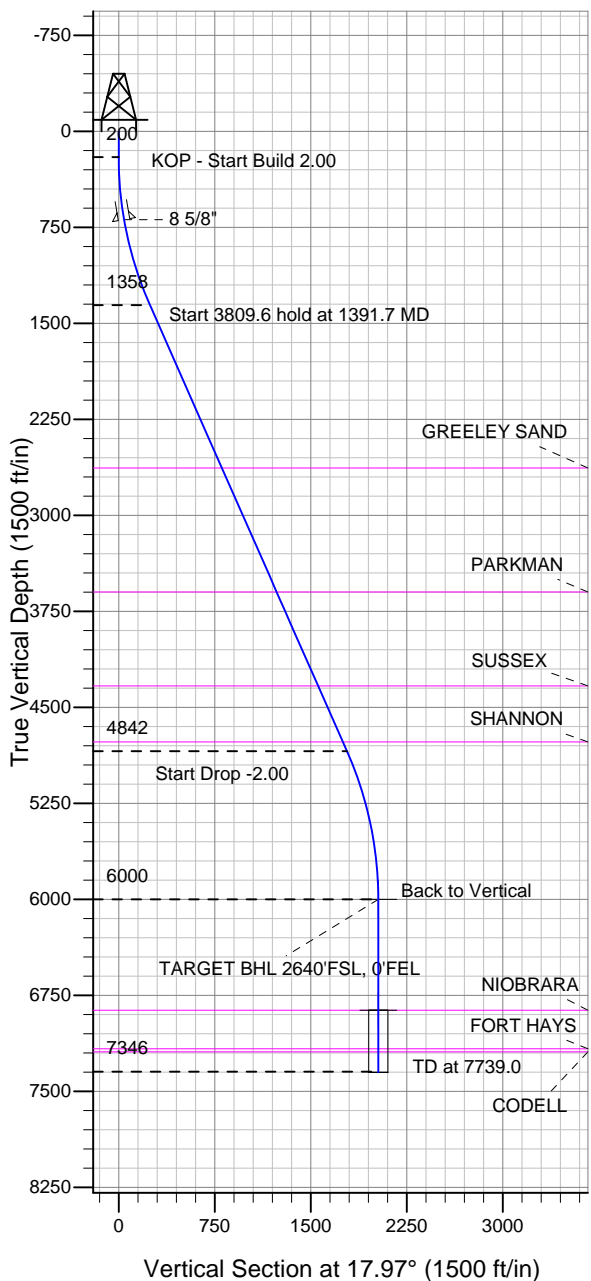
ENSIGN

Directional

Well Name: Fritzler 17-42-11

Surface Location: Fritzler 17-23-18 Pad Sec.17-T6N-R66W
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone
 Ground Elevation: 4771.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1419525.97 3196210.39 40.482858 -104.794631
 Original Well Elev WELL @ 4785.0ft (Original Well Elev)

Great Western



Fritzler 17-23-18 Pad Sec.17-T6N-R66W
 Fritzler 17-42-11
 Plan #1 (6-26-12)
 8:08, June 27 2012



Azimuths to True North
 Magnetic North: 8.75°

Magnetic Field
 Strength: 53063.0nT
 Dip Angle: 67.08°
 Date: 6/27/2012
 Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 2640'FSL, 0'FEL	6000.0	1929.1	625.9	40.488153	-104.792381	Point
TARGET CIRCLE 2640'FSL & 0'FEL	6865.0	1929.1	625.9	40.488153	-104.792381	Circle (Radius: 75.0)

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	200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.0	
3	1391.7	23.83	17.97	1357.6	232.4	75.4	2.00	17.97	244.3	
4	5201.3	23.83	17.97	4842.4	1696.7	550.5	0.00	0.00	1783.7	
5	6393.0	0.00	0.00	6000.0	1929.1	625.9	2.00	180.00	2028.1	TARGET BHL 2640'FSL, 0'FEL
6	7744.0	0.00	0.00	7351.0	1929.1	625.9	0.00	0.00	2028.1	



Directional

Great Western

SEC.17-T6N-R66W

Fritzler 17-23-18 Pad Sec.17-T6N-R66W

Fritzler 17-42-11

Wellbore #1

Plan: Plan #1 (6-26-12)

Standard Planning Report

27 June, 2012

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	
200.0	0.00	0.00	200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,391.7	23.83	17.97	1,357.6	232.4	75.4	2.00	2.00	0.00	17.97	
5,201.3	23.83	17.97	4,842.4	1,696.7	550.5	0.00	0.00	0.00	0.00	
6,393.0	0.00	0.00	6,000.0	1,929.1	625.9	2.00	-2.00	0.00	180.00	TARGET BHL 2640
7,744.0	0.00	0.00	7,351.0	1,929.1	625.9	0.00	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well Fritzler 17-42-11
Company:	Great Western	TVD Reference:	WELL @ 4785.0ft (Original Well Elev)
Project:	SEC.17-T6N-R66W	MD Reference:	WELL @ 4785.0ft (Original Well Elev)
Site:	Fritzler 17-23-18 Pad Sec.17-T6N-R66W	North Reference:	True
Well:	Fritzler 17-42-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-26-12)		

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
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
160.0	0.00	0.00	160.0	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
KOP - Start Build 2.00									
240.0	0.80	17.97	240.0	0.3	0.1	0.3	2.00	2.00	0.00
280.0	1.60	17.97	280.0	1.1	0.3	1.1	2.00	2.00	0.00
320.0	2.40	17.97	320.0	2.4	0.8	2.5	2.00	2.00	0.00
360.0	3.20	17.97	359.9	4.2	1.4	4.5	2.00	2.00	0.00
400.0	4.00	17.97	399.8	6.6	2.2	7.0	2.00	2.00	0.00
440.0	4.80	17.97	439.7	9.6	3.1	10.0	2.00	2.00	0.00
480.0	5.60	17.97	479.6	13.0	4.2	13.7	2.00	2.00	0.00
520.0	6.40	17.97	519.3	17.0	5.5	17.9	2.00	2.00	0.00
560.0	7.20	17.97	559.1	21.5	7.0	22.6	2.00	2.00	0.00
600.0	8.00	17.97	598.7	26.5	8.6	27.9	2.00	2.00	0.00
640.0	8.80	17.97	638.3	32.1	10.4	33.7	2.00	2.00	0.00
680.0	9.60	17.97	677.8	38.2	12.4	40.1	2.00	2.00	0.00
692.4	9.85	17.97	690.0	40.2	13.0	42.2	2.00	2.00	0.00
8 5/8"									
720.0	10.40	17.97	717.1	44.8	14.5	47.1	2.00	2.00	0.00
760.0	11.20	17.97	756.4	51.9	16.8	54.6	2.00	2.00	0.00
800.0	12.00	17.97	795.6	59.5	19.3	62.6	2.00	2.00	0.00
840.0	12.80	17.97	834.7	67.7	22.0	71.2	2.00	2.00	0.00
880.0	13.60	17.97	873.6	76.4	24.8	80.3	2.00	2.00	0.00
920.0	14.40	17.97	912.4	85.6	27.8	90.0	2.00	2.00	0.00
960.0	15.20	17.97	951.1	95.3	30.9	100.2	2.00	2.00	0.00
1,000.0	16.00	17.97	989.6	105.6	34.2	111.0	2.00	2.00	0.00
1,040.0	16.80	17.97	1,028.0	116.3	37.7	122.3	2.00	2.00	0.00
1,080.0	17.60	17.97	1,066.2	127.6	41.4	134.1	2.00	2.00	0.00
1,120.0	18.40	17.97	1,104.3	139.3	45.2	146.5	2.00	2.00	0.00
1,160.0	19.20	17.97	1,142.1	151.6	49.2	159.3	2.00	2.00	0.00
1,200.0	20.00	17.97	1,179.8	164.3	53.3	172.8	2.00	2.00	0.00
1,240.0	20.80	17.97	1,217.3	177.6	57.6	186.7	2.00	2.00	0.00
1,280.0	21.60	17.97	1,254.6	191.4	62.1	201.2	2.00	2.00	0.00
1,320.0	22.40	17.97	1,291.7	205.6	66.7	216.2	2.00	2.00	0.00
1,360.0	23.20	17.97	1,328.6	220.4	71.5	231.7	2.00	2.00	0.00
1,391.7	23.83	17.97	1,357.6	232.4	75.4	244.3	2.00	2.00	0.00
Start 3809.6 hold at 1391.7 MD									
1,400.0	23.83	17.97	1,365.2	235.6	76.4	247.7	0.00	0.00	0.00
1,440.0	23.83	17.97	1,401.8	250.9	81.4	263.8	0.00	0.00	0.00
1,480.0	23.83	17.97	1,438.4	266.3	86.4	280.0	0.00	0.00	0.00
1,520.0	23.83	17.97	1,475.0	281.7	91.4	296.2	0.00	0.00	0.00
1,560.0	23.83	17.97	1,511.6	297.1	96.4	312.3	0.00	0.00	0.00
1,600.0	23.83	17.97	1,548.2	312.4	101.4	328.5	0.00	0.00	0.00
1,640.0	23.83	17.97	1,584.8	327.8	106.4	344.6	0.00	0.00	0.00
1,680.0	23.83	17.97	1,621.3	343.2	111.3	360.8	0.00	0.00	0.00
1,720.0	23.83	17.97	1,657.9	358.6	116.3	377.0	0.00	0.00	0.00
1,760.0	23.83	17.97	1,694.5	373.9	121.3	393.1	0.00	0.00	0.00
1,800.0	23.83	17.97	1,731.1	389.3	126.3	409.3	0.00	0.00	0.00
1,840.0	23.83	17.97	1,767.7	404.7	131.3	425.5	0.00	0.00	0.00
1,880.0	23.83	17.97	1,804.3	420.1	136.3	441.6	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Fritzler 17-42-11
Company:	Great Western	TVD Reference:	WELL @ 4785.0ft (Original Well Elev)
Project:	SEC.17-T6N-R66W	MD Reference:	WELL @ 4785.0ft (Original Well Elev)
Site:	Fritzler 17-23-18 Pad Sec.17-T6N-R66W	North Reference:	True
Well:	Fritzler 17-42-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-26-12)		

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)
1,920.0	23.83	17.97	1,840.9	435.4	141.3	457.8	0.00	0.00	0.00
1,960.0	23.83	17.97	1,877.5	450.8	146.3	474.0	0.00	0.00	0.00
2,000.0	23.83	17.97	1,914.1	466.2	151.2	490.1	0.00	0.00	0.00
2,040.0	23.83	17.97	1,950.6	481.6	156.2	506.3	0.00	0.00	0.00
2,080.0	23.83	17.97	1,987.2	496.9	161.2	522.4	0.00	0.00	0.00
2,120.0	23.83	17.97	2,023.8	512.3	166.2	538.6	0.00	0.00	0.00
2,160.0	23.83	17.97	2,060.4	527.7	171.2	554.8	0.00	0.00	0.00
2,200.0	23.83	17.97	2,097.0	543.1	176.2	570.9	0.00	0.00	0.00
2,240.0	23.83	17.97	2,133.6	558.4	181.2	587.1	0.00	0.00	0.00
2,280.0	23.83	17.97	2,170.2	573.8	186.2	603.3	0.00	0.00	0.00
2,320.0	23.83	17.97	2,206.8	589.2	191.2	619.4	0.00	0.00	0.00
2,360.0	23.83	17.97	2,243.3	604.6	196.1	635.6	0.00	0.00	0.00
2,400.0	23.83	17.97	2,279.9	619.9	201.1	651.8	0.00	0.00	0.00
2,440.0	23.83	17.97	2,316.5	635.3	206.1	667.9	0.00	0.00	0.00
2,480.0	23.83	17.97	2,353.1	650.7	211.1	684.1	0.00	0.00	0.00
2,520.0	23.83	17.97	2,389.7	666.1	216.1	700.2	0.00	0.00	0.00
2,560.0	23.83	17.97	2,426.3	681.4	221.1	716.4	0.00	0.00	0.00
2,600.0	23.83	17.97	2,462.9	696.8	226.1	732.6	0.00	0.00	0.00
2,640.0	23.83	17.97	2,499.5	712.2	231.1	748.7	0.00	0.00	0.00
2,680.0	23.83	17.97	2,536.1	727.6	236.0	764.9	0.00	0.00	0.00
2,720.0	23.83	17.97	2,572.6	742.9	241.0	781.1	0.00	0.00	0.00
2,760.0	23.83	17.97	2,609.2	758.3	246.0	797.2	0.00	0.00	0.00
2,781.6	23.83	17.97	2,629.0	766.6	248.7	806.0	0.00	0.00	0.00
GREELEY SAND									
2,800.0	23.83	17.97	2,645.8	773.7	251.0	813.4	0.00	0.00	0.00
2,840.0	23.83	17.97	2,682.4	789.1	256.0	829.6	0.00	0.00	0.00
2,880.0	23.83	17.97	2,719.0	804.4	261.0	845.7	0.00	0.00	0.00
2,920.0	23.83	17.97	2,755.6	819.8	266.0	861.9	0.00	0.00	0.00
2,960.0	23.83	17.97	2,792.2	835.2	271.0	878.0	0.00	0.00	0.00
3,000.0	23.83	17.97	2,828.8	850.6	276.0	894.2	0.00	0.00	0.00
3,040.0	23.83	17.97	2,865.4	865.9	280.9	910.4	0.00	0.00	0.00
3,080.0	23.83	17.97	2,901.9	881.3	285.9	926.5	0.00	0.00	0.00
3,120.0	23.83	17.97	2,938.5	896.7	290.9	942.7	0.00	0.00	0.00
3,160.0	23.83	17.97	2,975.1	912.1	295.9	958.9	0.00	0.00	0.00
3,200.0	23.83	17.97	3,011.7	927.4	300.9	975.0	0.00	0.00	0.00
3,240.0	23.83	17.97	3,048.3	942.8	305.9	991.2	0.00	0.00	0.00
3,280.0	23.83	17.97	3,084.9	958.2	310.9	1,007.4	0.00	0.00	0.00
3,320.0	23.83	17.97	3,121.5	973.6	315.9	1,023.5	0.00	0.00	0.00
3,360.0	23.83	17.97	3,158.1	988.9	320.8	1,039.7	0.00	0.00	0.00
3,400.0	23.83	17.97	3,194.7	1,004.3	325.8	1,055.8	0.00	0.00	0.00
3,440.0	23.83	17.97	3,231.2	1,019.7	330.8	1,072.0	0.00	0.00	0.00
3,480.0	23.83	17.97	3,267.8	1,035.1	335.8	1,088.2	0.00	0.00	0.00
3,520.0	23.83	17.97	3,304.4	1,050.4	340.8	1,104.3	0.00	0.00	0.00
3,560.0	23.83	17.97	3,341.0	1,065.8	345.8	1,120.5	0.00	0.00	0.00
3,600.0	23.83	17.97	3,377.6	1,081.2	350.8	1,136.7	0.00	0.00	0.00
3,640.0	23.83	17.97	3,414.2	1,096.6	355.8	1,152.8	0.00	0.00	0.00
3,680.0	23.83	17.97	3,450.8	1,111.9	360.7	1,169.0	0.00	0.00	0.00
3,720.0	23.83	17.97	3,487.4	1,127.3	365.7	1,185.2	0.00	0.00	0.00
3,760.0	23.83	17.97	3,524.0	1,142.7	370.7	1,201.3	0.00	0.00	0.00
3,800.0	23.83	17.97	3,560.5	1,158.1	375.7	1,217.5	0.00	0.00	0.00
3,840.0	23.83	17.97	3,597.1	1,173.4	380.7	1,233.6	0.00	0.00	0.00
3,840.9	23.83	17.97	3,598.0	1,173.8	380.8	1,234.0	0.00	0.00	0.00
PARKMAN									
3,880.0	23.83	17.97	3,633.7	1,188.8	385.7	1,249.8	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Fritzler 17-42-11
Company:	Great Western	TVD Reference:	WELL @ 4785.0ft (Original Well Elev)
Project:	SEC.17-T6N-R66W	MD Reference:	WELL @ 4785.0ft (Original Well Elev)
Site:	Fritzler 17-23-18 Pad Sec.17-T6N-R66W	North Reference:	True
Well:	Fritzler 17-42-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-26-12)		

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)
3,920.0	23.83	17.97	3,670.3	1,204.2	390.7	1,266.0	0.00	0.00	0.00
3,960.0	23.83	17.97	3,706.9	1,219.6	395.7	1,282.1	0.00	0.00	0.00
4,000.0	23.83	17.97	3,743.5	1,234.9	400.7	1,298.3	0.00	0.00	0.00
4,040.0	23.83	17.97	3,780.1	1,250.3	405.6	1,314.5	0.00	0.00	0.00
4,080.0	23.83	17.97	3,816.7	1,265.7	410.6	1,330.6	0.00	0.00	0.00
4,120.0	23.83	17.97	3,853.3	1,281.1	415.6	1,346.8	0.00	0.00	0.00
4,160.0	23.83	17.97	3,889.8	1,296.4	420.6	1,363.0	0.00	0.00	0.00
4,200.0	23.83	17.97	3,926.4	1,311.8	425.6	1,379.1	0.00	0.00	0.00
4,240.0	23.83	17.97	3,963.0	1,327.2	430.6	1,395.3	0.00	0.00	0.00
4,280.0	23.83	17.97	3,999.6	1,342.6	435.6	1,411.4	0.00	0.00	0.00
4,320.0	23.83	17.97	4,036.2	1,357.9	440.6	1,427.6	0.00	0.00	0.00
4,360.0	23.83	17.97	4,072.8	1,373.3	445.5	1,443.8	0.00	0.00	0.00
4,400.0	23.83	17.97	4,109.4	1,388.7	450.5	1,459.9	0.00	0.00	0.00
4,440.0	23.83	17.97	4,146.0	1,404.1	455.5	1,476.1	0.00	0.00	0.00
4,480.0	23.83	17.97	4,182.6	1,419.4	460.5	1,492.3	0.00	0.00	0.00
4,520.0	23.83	17.97	4,219.1	1,434.8	465.5	1,508.4	0.00	0.00	0.00
4,560.0	23.83	17.97	4,255.7	1,450.2	470.5	1,524.6	0.00	0.00	0.00
4,600.0	23.83	17.97	4,292.3	1,465.6	475.5	1,540.8	0.00	0.00	0.00
4,640.0	23.83	17.97	4,328.9	1,480.9	480.5	1,556.9	0.00	0.00	0.00
4,643.4	23.83	17.97	4,332.0	1,482.2	480.9	1,558.3	0.00	0.00	0.00
SUSSEX									
4,680.0	23.83	17.97	4,365.5	1,496.3	485.5	1,573.1	0.00	0.00	0.00
4,720.0	23.83	17.97	4,402.1	1,511.7	490.4	1,589.2	0.00	0.00	0.00
4,760.0	23.83	17.97	4,438.7	1,527.1	495.4	1,605.4	0.00	0.00	0.00
4,800.0	23.83	17.97	4,475.3	1,542.4	500.4	1,621.6	0.00	0.00	0.00
4,840.0	23.83	17.97	4,511.9	1,557.8	505.4	1,637.7	0.00	0.00	0.00
4,880.0	23.83	17.97	4,548.4	1,573.2	510.4	1,653.9	0.00	0.00	0.00
4,920.0	23.83	17.97	4,585.0	1,588.6	515.4	1,670.1	0.00	0.00	0.00
4,960.0	23.83	17.97	4,621.6	1,603.9	520.4	1,686.2	0.00	0.00	0.00
5,000.0	23.83	17.97	4,658.2	1,619.3	525.4	1,702.4	0.00	0.00	0.00
5,040.0	23.83	17.97	4,694.8	1,634.7	530.3	1,718.6	0.00	0.00	0.00
5,080.0	23.83	17.97	4,731.4	1,650.1	535.3	1,734.7	0.00	0.00	0.00
5,120.0	23.83	17.97	4,768.0	1,665.4	540.3	1,750.9	0.00	0.00	0.00
5,122.2	23.83	17.97	4,770.0	1,666.3	540.6	1,751.8	0.00	0.00	0.00
SHANNON									
5,160.0	23.83	17.97	4,804.6	1,680.8	545.3	1,767.0	0.00	0.00	0.00
5,200.0	23.83	17.97	4,841.1	1,696.2	550.3	1,783.2	0.00	0.00	0.00
5,201.3	23.83	17.97	4,842.4	1,696.7	550.5	1,783.7	0.00	0.00	0.00
Start Drop -2.00									
5,240.0	23.06	17.97	4,877.8	1,711.3	555.2	1,799.1	2.00	-2.00	0.00
5,280.0	22.26	17.97	4,914.8	1,726.0	560.0	1,814.5	2.00	-2.00	0.00
5,320.0	21.46	17.97	4,951.9	1,740.2	564.6	1,829.4	2.00	-2.00	0.00
5,360.0	20.66	17.97	4,989.2	1,753.8	569.0	1,843.8	2.00	-2.00	0.00
5,400.0	19.86	17.97	5,026.7	1,767.0	573.3	1,857.7	2.00	-2.00	0.00
5,440.0	19.06	17.97	5,064.4	1,779.7	577.4	1,871.0	2.00	-2.00	0.00
5,480.0	18.26	17.97	5,102.3	1,791.8	581.3	1,883.8	2.00	-2.00	0.00
5,520.0	17.46	17.97	5,140.4	1,803.5	585.1	1,896.1	2.00	-2.00	0.00
5,560.0	16.66	17.97	5,178.7	1,814.7	588.7	1,907.8	2.00	-2.00	0.00
5,600.0	15.86	17.97	5,217.1	1,825.3	592.2	1,919.0	2.00	-2.00	0.00
5,640.0	15.06	17.97	5,255.6	1,835.5	595.5	1,929.7	2.00	-2.00	0.00
5,680.0	14.26	17.97	5,294.3	1,845.1	598.6	1,939.8	2.00	-2.00	0.00
5,720.0	13.46	17.97	5,333.1	1,854.2	601.6	1,949.4	2.00	-2.00	0.00
5,760.0	12.66	17.97	5,372.1	1,862.8	604.4	1,958.4	2.00	-2.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Fritzler 17-42-11
Company:	Great Western	TVD Reference:	WELL @ 4785.0ft (Original Well Elev)
Project:	SEC.17-T6N-R66W	MD Reference:	WELL @ 4785.0ft (Original Well Elev)
Site:	Fritzler 17-23-18 Pad Sec.17-T6N-R66W	North Reference:	True
Well:	Fritzler 17-42-11	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1 (6-26-12)		

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)
5,800.0	11.86	17.97	5,411.2	1,870.9	607.0	1,966.9	2.00	-2.00	0.00
5,840.0	11.06	17.97	5,450.4	1,878.5	609.4	1,974.8	2.00	-2.00	0.00
5,880.0	10.26	17.97	5,489.7	1,885.5	611.7	1,982.2	2.00	-2.00	0.00
5,920.0	9.46	17.97	5,529.1	1,892.0	613.8	1,989.1	2.00	-2.00	0.00
5,960.0	8.66	17.97	5,568.6	1,898.0	615.8	1,995.4	2.00	-2.00	0.00
6,000.0	7.86	17.97	5,608.2	1,903.5	617.5	2,001.1	2.00	-2.00	0.00
6,040.0	7.06	17.97	5,647.9	1,908.4	619.2	2,006.3	2.00	-2.00	0.00
6,080.0	6.26	17.97	5,687.6	1,912.8	620.6	2,011.0	2.00	-2.00	0.00
6,120.0	5.46	17.97	5,727.4	1,916.7	621.8	2,015.1	2.00	-2.00	0.00
6,160.0	4.66	17.97	5,767.2	1,920.1	622.9	2,018.6	2.00	-2.00	0.00
6,200.0	3.86	17.97	5,807.1	1,922.9	623.9	2,021.6	2.00	-2.00	0.00
6,240.0	3.06	17.97	5,847.0	1,925.2	624.6	2,024.0	2.00	-2.00	0.00
6,280.0	2.26	17.97	5,887.0	1,927.0	625.2	2,025.8	2.00	-2.00	0.00
6,320.0	1.46	17.97	5,927.0	1,928.2	625.6	2,027.1	2.00	-2.00	0.00
6,360.0	0.66	17.97	5,967.0	1,928.9	625.8	2,027.9	2.00	-2.00	0.00
6,393.0	0.00	0.00	6,000.0	1,929.1	625.9	2,028.1	2.00	-2.00	-54.41
Back to Vertical									
6,400.0	0.00	0.00	6,007.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
6,440.0	0.00	0.00	6,047.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
6,480.0	0.00	0.00	6,087.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
6,520.0	0.00	0.00	6,127.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
6,560.0	0.00	0.00	6,167.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
6,600.0	0.00	0.00	6,207.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
6,640.0	0.00	0.00	6,247.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
6,680.0	0.00	0.00	6,287.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
6,720.0	0.00	0.00	6,327.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
6,760.0	0.00	0.00	6,367.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
6,800.0	0.00	0.00	6,407.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
6,840.0	0.00	0.00	6,447.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
6,880.0	0.00	0.00	6,487.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
6,920.0	0.00	0.00	6,527.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
6,960.0	0.00	0.00	6,567.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
7,000.0	0.00	0.00	6,607.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
7,040.0	0.00	0.00	6,647.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
7,080.0	0.00	0.00	6,687.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
7,120.0	0.00	0.00	6,727.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
7,160.0	0.00	0.00	6,767.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
7,200.0	0.00	0.00	6,807.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
7,240.0	0.00	0.00	6,847.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
7,258.0	0.00	0.00	6,865.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
NIOBRARA									
7,280.0	0.00	0.00	6,887.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
7,320.0	0.00	0.00	6,927.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
7,360.0	0.00	0.00	6,967.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
7,400.0	0.00	0.00	7,007.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
7,440.0	0.00	0.00	7,047.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
7,480.0	0.00	0.00	7,087.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
7,520.0	0.00	0.00	7,127.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
7,560.0	0.00	0.00	7,167.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
FORT HAYS									
7,584.0	0.00	0.00	7,191.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
CODELL									
7,600.0	0.00	0.00	7,207.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00

Database: Landmark
Company: Great Western
Project: SEC.17-T6N-R66W
Site: Fritzler 17-23-18 Pad Sec.17-T6N-R66W
Well: Fritzler 17-42-11
Wellbore: Wellbore #1
Design: Plan #1 (6-26-12)

Local Co-ordinate Reference: Well Fritzler 17-42-11
TVD Reference: WELL @ 4785.0ft (Original Well Elev)
MD Reference: WELL @ 4785.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

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)
7,640.0	0.00	0.00	7,247.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
7,680.0	0.00	0.00	7,287.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
7,720.0	0.00	0.00	7,327.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
7,739.0	0.00	0.00	7,346.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00
TD at 7739.0									
7,744.0	0.00	0.00	7,351.0	1,929.1	625.9	2,028.1	0.00	0.00	0.00

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
692.4	690.0	8 5/8"	8-5/8	12-1/4

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
2,781.6	2,629.0	GREELEY SAND		0.00	
3,840.9	3,598.0	PARKMAN		0.00	
4,643.4	4,332.0	SUSSEX		0.00	
5,122.2	4,770.0	SHANNON		0.00	
7,258.0	6,865.0	NIOBRARA		0.00	
7,560.0	7,167.0	FORT HAYS		0.00	
7,584.0	7,191.0	CODELL		0.00	

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
200.0	200.0	0.0	0.0	KOP - Start Build 2.00
1,391.7	1,357.6	232.4	75.4	Start 3809.6 hold at 1391.7 MD
5,201.3	4,842.4	1,696.7	550.5	Start Drop -2.00
6,393.0	6,000.0	1,929.1	625.9	Back to Vertical
7,739.0	7,346.0	1,929.1	625.9	TD at 7739.0



Great Western

SEC.17-T6N-R66W

Fritzler 17-23-18 Pad Sec.17-T6N-R66W

Fritzler 17-42-11

Wellbore #1

Plan #1 (6-26-12)

Anticollision Report

29 June, 2012

Company:	Great Western	Local Co-ordinate Reference:	Well Fritzler 17-42-11
Project:	SEC.17-T6N-R66W	TVD Reference:	WELL @ 4785.0ft (Original Well Elev)
Reference Site:	Fritzler 17-23-18 Pad Sec.17-T6N-R66W	MD Reference:	WELL @ 4785.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Fritzler 17-42-11	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (6-26-12)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 168-MWD												Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
1,200.0	1,179.8	1,181.1	1,177.5	4.1	2.8	169.78	-69.3	18.9	236.2	230.6	5.56	42.477	
1,300.0	1,273.2	1,271.6	1,267.4	4.7	3.0	173.43	-68.7	7.9	273.1	267.0	6.06	45.073	
1,391.7	1,357.6	1,348.9	1,343.9	5.4	3.3	176.17	-68.7	-2.7	311.3	304.8	6.52	47.766	
1,400.0	1,365.2	1,355.7	1,350.6	5.5	3.3	176.40	-68.7	-3.7	315.0	308.5	6.56	47.999	
1,500.0	1,456.7	1,444.0	1,437.9	6.2	3.6	179.07	-69.6	-17.1	360.1	353.0	7.14	50.468	
1,600.0	1,548.2	1,529.9	1,522.6	7.0	3.9	-178.63	-69.8	-31.7	405.5	397.8	7.73	52.478	
1,700.0	1,639.6	1,614.6	1,605.8	7.7	4.2	-176.68	-70.4	-47.1	452.3	443.9	8.34	54.222	
1,800.0	1,731.1	1,700.1	1,689.7	8.5	4.6	-174.94	-70.9	-63.7	499.6	490.6	8.98	55.615	
1,900.0	1,822.6	1,780.7	1,768.5	9.3	4.9	-173.41	-71.3	-80.7	547.8	538.2	9.63	56.868	
2,000.0	1,914.1	1,853.0	1,838.9	10.1	5.3	-172.19	-72.7	-96.9	598.0	587.8	10.27	58.228	
2,100.0	2,005.5	1,936.4	1,920.1	10.9	5.6	-170.97	-75.3	-116.2	649.6	638.6	10.96	59.262	
2,200.0	2,097.0	2,020.0	2,001.2	11.6	6.0	-169.87	-77.8	-136.0	701.4	689.8	11.66	60.140	
2,300.0	2,188.5	2,094.4	2,073.2	12.4	6.4	-168.92	-79.8	-154.7	754.0	741.7	12.36	60.997	
2,400.0	2,279.9	2,171.9	2,147.3	13.2	6.9	-167.80	-81.6	-177.4	808.1	795.0	13.09	61.716	
2,500.0	2,371.4	2,264.5	2,236.1	14.0	7.3	-166.68	-83.7	-203.6	862.0	848.1	13.88	62.112	
2,600.0	2,462.9	2,370.6	2,338.4	14.8	7.8	-165.69	-85.5	-231.4	914.8	900.1	14.68	62.301	
2,700.0	2,554.4	2,467.7	2,432.6	15.5	8.3	-164.95	-85.4	-255.1	965.4	949.9	15.47	62.400	
2,800.0	2,645.8	2,544.8	2,506.8	16.3	8.7	-164.25	-84.1	-276.0	1,016.3	1,000.1	16.23	62.635	
2,900.0	2,737.3	2,609.0	2,568.4	17.1	9.0	-163.68	-83.3	-294.2	1,068.3	1,051.4	16.95	63.032	
3,000.0	2,828.8	2,676.9	2,633.1	17.9	9.5	-163.09	-83.0	-314.6	1,121.8	1,104.1	17.71	63.334	
3,100.0	2,920.2	2,742.2	2,694.9	18.7	9.9	-162.49	-83.2	-335.7	1,177.1	1,158.6	18.48	63.681	
3,200.0	3,011.7	2,846.4	2,792.8	19.5	10.6	-161.50	-82.8	-371.6	1,233.2	1,213.7	19.48	63.297	
3,300.0	3,103.2	2,969.4	2,909.7	20.3	11.3	-160.58	-79.6	-409.7	1,285.8	1,265.3	20.52	62.650	
3,400.0	3,194.7	3,050.3	2,986.9	21.0	11.7	-160.06	-77.4	-433.7	1,337.9	1,316.6	21.34	62.683	
3,500.0	3,286.1	3,138.4	3,071.3	21.8	12.2	-159.62	-76.0	-458.8	1,390.4	1,368.2	22.18	62.692	
3,600.0	3,377.6	3,210.2	3,140.5	22.6	12.6	-159.38	-76.0	-477.6	1,442.8	1,419.8	22.91	62.971	
3,700.0	3,469.1	3,264.0	3,192.5	23.4	12.9	-159.23	-77.0	-491.8	1,496.5	1,472.9	23.57	63.500	
3,800.0	3,560.5	3,334.7	3,260.6	24.2	13.2	-159.05	-79.2	-510.9	1,551.4	1,527.1	24.29	63.879	
3,900.0	3,652.0	3,398.1	3,321.4	25.0	13.6	-158.92	-82.2	-528.1	1,607.4	1,582.4	24.97	64.364	
4,000.0	3,743.5	3,465.3	3,386.0	25.8	14.0	-158.81	-86.2	-546.5	1,664.4	1,638.7	25.67	64.836	
4,100.0	3,835.0	3,576.9	3,493.1	26.5	14.6	-158.63	-92.4	-576.8	1,721.1	1,694.6	26.52	64.888	
4,200.0	3,926.4	3,704.1	3,615.6	27.3	15.2	-158.38	-95.9	-611.1	1,775.7	1,748.2	27.45	64.687	
4,300.0	4,017.9	3,784.2	3,693.0	28.1	15.6	-158.24	-97.5	-631.9	1,829.3	1,801.1	28.21	64.850	
4,400.0	4,109.4	3,854.8	3,760.8	28.9	16.0	-158.08	-98.6	-651.5	1,883.7	1,854.7	28.95	65.068	
4,500.0	4,200.8	3,934.1	3,836.8	29.7	16.5	-157.89	-99.9	-674.1	1,938.3	1,908.6	29.74	65.171	
4,600.0	4,292.3	4,029.1	3,927.9	30.5	17.0	-157.69	-101.5	-700.8	1,993.0	1,962.4	30.59	65.159	
4,700.0	4,383.8	4,157.8	4,052.4	31.3	17.7	-157.54	-103.9	-733.4	2,046.1	2,014.6	31.51	64.933	
4,800.0	4,475.3	4,244.9	4,136.9	32.1	18.1	-157.46	-105.0	-754.5	2,098.4	2,066.1	32.28	65.010	
4,900.0	4,566.7	4,321.2	4,210.7	32.8	18.5	-157.36	-105.6	-773.9	2,151.0	2,118.0	33.03	65.126	
5,000.0	4,658.2	4,405.6	4,292.0	33.6	18.9	-157.21	-105.6	-796.5	2,203.8	2,170.0	33.83	65.137	
5,100.0	4,749.7	4,511.6	4,394.3	34.4	19.5	-157.05	-105.1	-824.2	2,255.9	2,221.2	34.72	64.970	
5,201.3	4,842.4	4,585.0	4,465.2	35.2	19.9	-156.95	-105.2	-843.3	2,309.0	2,273.5	35.48	65.084	
5,300.0	4,933.3	4,668.3	4,545.6	35.9	20.3	-157.29	-105.6	-864.9	2,359.7	2,323.3	36.40	64.829	
5,400.0	5,026.7	4,765.0	4,639.2	36.4	20.8	-157.55	-106.1	-889.4	2,407.9	2,370.6	37.31	64.545	
5,500.0	5,121.4	4,849.7	4,721.1	36.9	21.2	-157.77	-106.2	-911.0	2,453.1	2,415.0	38.14	64.320	
5,600.0	5,217.1	4,921.8	4,790.6	37.4	21.6	-157.94	-106.1	-930.0	2,495.9	2,457.0	38.90	64.168	
5,700.0	5,313.7	4,996.1	4,862.0	37.8	22.0	-158.06	-106.3	-950.4	2,536.5	2,496.9	39.62	64.015	
5,800.0	5,411.2	5,078.6	4,941.5	38.2	22.5	-158.12	-107.1	-972.6	2,574.6	2,534.3	40.33	63.832	
5,900.0	5,509.4	5,189.0	5,047.9	38.5	23.0	-158.08	-109.2	-1,001.8	2,610.0	2,568.9	41.10	63.498	
6,000.0	5,608.2	5,543.1	5,394.2	38.8	24.5	-157.44	-105.7	-1,074.5	2,635.4	2,592.7	42.72	61.689	
6,100.0	5,707.5	5,716.9	5,566.9	39.0	25.0	-157.39	-104.0	-1,094.2	2,652.9	2,609.6	43.37	61.174	
6,200.0	5,807.1	5,855.2	5,704.7	39.2	25.3	-157.38	-102.4	-1,105.6	2,665.2	2,621.4	43.81	60.839	

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

Offset Design Fritzler 17-23-18 Pad Sec.17-T6N-R66W - Fritzler 34-17 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error:	0.0 ft
Survey Program: 168-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)			
6,300.0	5,907.0	5,965.0	5,814.3	39.3	25.5	-157.37	-101.8	-1,112.3	2,673.4	2,629.3	44.10	60.625		
6,393.0	6,000.0	6,052.6	5,901.7	39.4	25.7	-139.37	-101.9	-1,116.9	2,678.0	2,633.8	44.27	60.490		
6,400.0	6,007.0	6,058.8	5,908.0	39.4	25.7	-139.36	-102.0	-1,117.2	2,678.3	2,634.0	44.29	60.470		
6,500.0	6,107.0	6,167.8	6,016.9	39.5	25.9	-139.29	-102.9	-1,122.2	2,682.0	2,637.4	44.60	60.138		
6,600.0	6,207.0	6,278.0	6,126.9	39.5	26.0	-139.24	-103.8	-1,126.5	2,685.1	2,640.2	44.90	59.806		
6,700.0	6,307.0	6,398.2	6,247.1	39.6	26.2	-139.18	-104.4	-1,130.5	2,687.7	2,642.4	45.21	59.449		
6,800.0	6,407.0	6,502.2	6,351.0	39.7	26.4	-139.14	-104.9	-1,133.4	2,689.9	2,644.4	45.49	59.129		
6,900.0	6,507.0	6,610.8	6,459.6	39.8	26.5	-139.11	-105.4	-1,135.9	2,691.7	2,645.9	45.78	58.802		
7,000.0	6,607.0	6,718.5	6,567.3	39.8	26.7	-139.09	-106.2	-1,137.8	2,693.4	2,647.3	46.05	58.485		
7,100.0	6,707.0	6,815.4	6,664.2	39.9	26.8	-139.08	-106.9	-1,139.1	2,694.8	2,648.5	46.31	58.189		
7,200.0	6,807.0	6,902.7	6,751.5	40.0	26.9	-139.07	-107.9	-1,140.4	2,696.6	2,650.1	46.56	57.921		
7,300.0	6,907.0	6,974.0	6,822.7	40.1	27.0	-139.07	-109.0	-1,141.5	2,699.0	2,652.2	46.78	57.692		
7,400.0	7,007.0	7,070.1	6,918.8	40.1	27.1	-139.07	-111.3	-1,143.1	2,701.8	2,654.8	47.03	57.446		
7,500.0	7,107.0	7,151.2	6,999.8	40.2	27.2	-139.09	-114.1	-1,144.4	2,705.5	2,658.2	47.26	57.243		
7,600.0	7,207.0	7,253.5	7,102.0	40.3	27.4	-139.13	-118.3	-1,145.9	2,709.6	2,662.1	47.52	57.021		
7,700.0	7,307.0	7,380.9	7,229.4	40.4	27.5	-139.16	-122.4	-1,147.7	2,713.0	2,665.1	47.81	56.745		
7,744.0	7,351.0	7,432.1	7,280.5	40.4	27.6	-139.16	-123.6	-1,148.4	2,714.1	2,666.2	47.93	56.623		

Company:	Great Western	Local Co-ordinate Reference:	Well Fritzler 17-42-11
Project:	SEC.17-T6N-R66W	TVD Reference:	WELL @ 4785.0ft (Original Well Elev)
Reference Site:	Fritzler 17-23-18 Pad Sec.17-T6N-R66W	MD Reference:	WELL @ 4785.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Fritzler 17-42-11	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (6-26-12)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-92.88	-0.7	-14.5	14.5	14.5	0.00	N/A		
100.0	100.0	100.0	100.0	0.1	0.1	-92.88	-0.7	-14.5	14.5	14.3	0.22	64.439		
200.0	200.0	200.0	200.0	0.3	0.3	-92.88	-0.7	-14.5	14.5	13.8	0.67	21.480 CC, ES		
300.0	300.0	300.0	300.0	0.6	0.6	-117.01	-0.7	-14.5	15.2	14.1	1.12	13.511		
400.0	399.8	399.8	399.8	0.8	0.8	-131.81	-0.7	-14.5	18.2	16.6	1.58	11.479 SF		
500.0	499.5	499.5	499.5	1.0	1.0	-146.87	-0.7	-14.5	24.9	22.8	2.05	12.116		
600.0	598.7	598.7	598.7	1.3	1.2	-157.52	-0.7	-14.5	35.7	33.2	2.52	14.171		
700.0	697.5	697.5	697.5	1.6	1.5	-164.23	-0.7	-14.5	50.5	47.5	2.98	16.927		
800.0	795.6	795.6	795.6	2.0	1.7	-168.46	-0.7	-14.5	69.1	65.6	3.45	20.030		
900.0	893.1	893.1	893.1	2.4	1.9	-171.21	-0.7	-14.5	91.3	87.3	3.92	23.309		
1,000.0	989.6	993.0	993.0	2.9	2.1	-172.81	0.8	-14.5	115.6	111.2	4.38	26.379		
1,100.0	1,085.3	1,094.0	1,093.8	3.5	2.4	-173.37	5.8	-14.6	140.3	135.5	4.85	28.927		
1,200.0	1,179.8	1,195.7	1,195.2	4.1	2.6	-173.33	14.5	-14.8	165.3	160.0	5.33	30.999		
1,300.0	1,273.2	1,298.2	1,296.9	4.7	2.8	-172.94	26.9	-15.1	190.5	184.7	5.83	32.666		
1,391.7	1,357.6	1,392.9	1,390.4	5.4	3.1	-172.36	41.6	-15.4	213.9	207.6	6.31	33.877		
1,400.0	1,365.2	1,401.4	1,398.9	5.5	3.1	-172.30	43.0	-15.5	216.0	209.6	6.36	33.955		
1,500.0	1,456.7	1,506.0	1,501.5	6.2	3.4	-171.48	63.1	-15.9	239.7	232.8	6.96	34.431		
1,600.0	1,548.2	1,611.9	1,604.6	7.0	3.8	-170.40	87.3	-16.5	260.4	252.8	7.61	34.206		
1,700.0	1,639.6	1,719.0	1,707.9	7.7	4.3	-169.08	115.5	-17.1	277.9	269.6	8.32	33.410		
1,800.0	1,731.1	1,821.3	1,805.6	8.5	4.7	-167.67	145.5	-17.8	292.9	283.8	9.07	32.298		
1,900.0	1,822.6	1,919.9	1,899.9	9.3	5.2	-166.41	174.7	-18.5	307.8	298.0	9.84	31.272		
2,000.0	1,914.1	2,018.6	1,994.1	10.1	5.7	-165.27	203.9	-19.2	322.9	312.2	10.65	30.311		
2,100.0	2,005.5	2,117.2	2,088.4	10.9	6.3	-164.23	233.1	-19.8	338.1	326.6	11.49	29.429		
2,200.0	2,097.0	2,215.9	2,182.6	11.6	6.8	-163.28	262.3	-20.5	353.3	341.0	12.34	28.622		
2,300.0	2,188.5	2,314.6	2,276.8	12.4	7.3	-162.41	291.5	-21.2	368.7	355.5	13.22	27.884		
2,400.0	2,279.9	2,413.2	2,371.1	13.2	7.9	-161.61	320.7	-21.8	384.1	370.0	14.12	27.210		
2,500.0	2,371.4	2,511.9	2,465.3	14.0	8.4	-160.87	349.9	-22.5	399.6	384.6	15.03	26.593		
2,600.0	2,462.9	2,610.6	2,559.6	14.8	9.0	-160.18	379.1	-23.2	415.2	399.3	15.95	26.029		
2,700.0	2,554.4	2,709.2	2,653.8	15.5	9.6	-159.55	408.3	-23.8	430.8	413.9	16.89	25.512		
2,800.0	2,645.8	2,807.9	2,748.0	16.3	10.1	-158.96	437.5	-24.5	446.5	428.7	17.83	25.037		
2,900.0	2,737.3	2,906.5	2,842.3	17.1	10.7	-158.41	466.7	-25.2	462.2	443.4	18.79	24.600		
3,000.0	2,828.8	3,005.2	2,936.5	17.9	11.3	-157.89	495.9	-25.9	478.0	458.2	19.75	24.197		
3,100.0	2,920.2	3,103.9	3,030.8	18.7	11.8	-157.41	525.1	-26.5	493.8	473.0	20.72	23.824		
3,200.0	3,011.7	3,202.5	3,125.0	19.5	12.4	-156.96	554.4	-27.2	509.6	487.9	21.70	23.480		
3,300.0	3,103.2	3,301.2	3,219.2	20.3	13.0	-156.53	583.6	-27.9	525.4	502.7	22.69	23.160		
3,400.0	3,194.7	3,399.9	3,313.5	21.0	13.5	-156.13	612.8	-28.5	541.3	517.6	23.68	22.863		
3,500.0	3,286.1	3,498.5	3,407.7	21.8	14.1	-155.76	642.0	-29.2	557.2	532.5	24.67	22.586		
3,600.0	3,377.6	3,597.2	3,502.0	22.6	14.7	-155.40	671.2	-29.9	573.1	547.5	25.67	22.328		
3,700.0	3,469.1	3,695.9	3,596.2	23.4	15.3	-155.06	700.4	-30.5	589.1	562.4	26.67	22.087		
3,800.0	3,560.5	3,794.5	3,690.4	24.2	15.9	-154.74	729.6	-31.2	605.0	577.3	27.68	21.860		
3,900.0	3,652.0	3,893.2	3,784.7	25.0	16.4	-154.44	758.8	-31.9	621.0	592.3	28.69	21.648		
4,000.0	3,743.5	3,991.8	3,878.9	25.8	17.0	-154.15	788.0	-32.5	637.0	607.3	29.70	21.449		
4,100.0	3,835.0	4,090.5	3,973.2	26.5	17.6	-153.88	817.2	-33.2	653.0	622.3	30.71	21.261		
4,200.0	3,926.4	4,189.2	4,067.4	27.3	18.2	-153.62	846.4	-33.9	669.0	637.3	31.73	21.084		
4,300.0	4,017.9	4,287.8	4,161.6	28.1	18.8	-153.37	875.6	-34.6	685.1	652.3	32.75	20.917		
4,400.0	4,109.4	4,386.5	4,255.9	28.9	19.3	-153.13	904.8	-35.2	701.1	667.3	33.77	20.759		
4,500.0	4,200.8	4,485.2	4,350.1	29.7	19.9	-152.91	934.0	-35.9	717.2	682.4	34.80	20.610		
4,600.0	4,292.3	4,583.8	4,444.4	30.5	20.5	-152.69	963.2	-36.6	733.2	697.4	35.82	20.468		
4,700.0	4,383.8	4,682.5	4,538.6	31.3	21.1	-152.48	992.4	-37.2	749.3	712.5	36.85	20.334		
4,800.0	4,475.3	4,781.2	4,632.8	32.1	21.7	-152.29	1,021.6	-37.9	765.4	727.5	37.88	20.206		
4,900.0	4,566.7	4,879.8	4,727.1	32.8	22.2	-152.10	1,050.8	-38.6	781.5	742.6	38.91	20.084		
5,000.0	4,658.2	4,978.5	4,821.3	33.6	22.8	-151.91	1,080.0	-39.2	797.6	757.7	39.94	19.969		

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

Company:	Great Western	Local Co-ordinate Reference:	Well Fritzler 17-42-11
Project:	SEC.17-T6N-R66W	TVD Reference:	WELL @ 4785.0ft (Original Well Elev)
Reference Site:	Fritzler 17-23-18 Pad Sec.17-T6N-R66W	MD Reference:	WELL @ 4785.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Fritzler 17-42-11	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (6-26-12)	Offset TVD Reference:	Offset Datum

Offset Design Fritzler 17-23-18 Pad Sec.17-T6N-R66W - Fritzler 43-17 - Wellbore #1 - Plan #1 (6-26-12)												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	4,749.7	5,077.1	4,915.6	34.4	23.4	-151.74	1,109.2	-39.9	813.7	772.7	40.98	19.858	
5,201.3	4,842.4	5,166.8	5,001.3	35.2	23.9	-151.61	1,135.3	-40.5	830.4	788.5	41.92	19.808	
5,300.0	4,933.3	5,247.8	5,079.4	35.9	24.3	-151.72	1,156.8	-41.0	847.0	804.3	42.71	19.833	
5,400.0	5,026.7	5,329.8	5,159.1	36.4	24.6	-151.84	1,176.3	-41.5	862.8	819.4	43.37	19.892	
5,500.0	5,121.4	5,411.7	5,239.1	36.9	24.9	-151.98	1,193.5	-41.8	877.4	833.4	43.96	19.957	
5,600.0	5,217.1	5,500.0	5,326.0	37.4	25.2	-152.13	1,209.4	-42.2	890.9	846.4	44.49	20.024	
5,700.0	5,313.7	5,575.1	5,400.2	37.8	25.4	-152.28	1,220.9	-42.5	903.3	858.4	44.91	20.114	
5,800.0	5,411.2	5,656.7	5,481.2	38.2	25.6	-152.45	1,231.1	-42.7	914.5	869.3	45.26	20.205	
5,900.0	5,509.4	5,738.2	5,562.2	38.5	25.7	-152.63	1,239.0	-42.9	924.6	879.1	45.53	20.306	
6,000.0	5,608.2	5,819.5	5,643.4	38.8	25.9	-152.82	1,244.6	-43.0	933.6	887.9	45.73	20.417	
6,100.0	5,707.5	5,900.0	5,723.8	39.0	26.0	-153.01	1,247.9	-43.1	941.5	895.7	45.84	20.538	
6,200.0	5,807.1	5,983.3	5,807.1	39.2	26.1	-153.22	1,248.9	-43.1	948.2	902.4	45.87	20.671	
6,300.0	5,907.0	6,083.2	5,907.0	39.3	26.2	-153.40	1,248.9	-43.1	952.7	906.8	45.89	20.759	
6,393.0	6,000.0	6,176.2	6,000.0	39.4	26.3	-135.48	1,248.9	-43.1	954.0	908.1	45.92	20.774	
6,400.0	6,007.0	6,183.2	6,007.0	39.4	26.3	-135.48	1,248.9	-43.1	954.0	908.1	45.94	20.767	
6,500.0	6,107.0	6,283.2	6,107.0	39.5	26.4	-135.48	1,248.9	-43.1	954.0	907.9	46.18	20.659	
6,600.0	6,207.0	6,383.2	6,207.0	39.5	26.5	-135.48	1,248.9	-43.1	954.0	907.6	46.42	20.552	
6,700.0	6,307.0	6,483.2	6,307.0	39.6	26.6	-135.48	1,248.9	-43.1	954.0	907.4	46.67	20.444	
6,800.0	6,407.0	6,583.2	6,407.0	39.7	26.7	-135.48	1,248.9	-43.1	954.0	907.1	46.91	20.336	
6,900.0	6,507.0	6,683.2	6,507.0	39.8	26.9	-135.48	1,248.9	-43.1	954.0	906.9	47.16	20.228	
7,000.0	6,607.0	6,783.2	6,607.0	39.8	27.0	-135.48	1,248.9	-43.1	954.0	906.6	47.42	20.120	
7,100.0	6,707.0	6,883.2	6,707.0	39.9	27.1	-135.48	1,248.9	-43.1	954.0	906.4	47.67	20.012	
7,200.0	6,807.0	6,983.2	6,807.0	40.0	27.2	-135.48	1,248.9	-43.1	954.0	906.1	47.93	19.904	
7,300.0	6,907.0	7,083.2	6,907.0	40.1	27.3	-135.48	1,248.9	-43.1	954.0	905.8	48.19	19.796	
7,400.0	7,007.0	7,183.2	7,007.0	40.1	27.4	-135.48	1,248.9	-43.1	954.0	905.6	48.46	19.688	
7,500.0	7,107.0	7,283.2	7,107.0	40.2	27.5	-135.48	1,248.9	-43.1	954.0	905.3	48.73	19.580	
7,600.0	7,207.0	7,383.2	7,207.0	40.3	27.7	-135.48	1,248.9	-43.1	954.0	905.0	49.00	19.472	
7,700.0	7,307.0	7,483.2	7,307.0	40.4	27.8	-135.48	1,248.9	-43.1	954.0	904.8	49.27	19.364	
7,727.5	7,334.4	7,510.6	7,334.4	40.4	27.8	-135.48	1,248.9	-43.1	954.0	904.7	49.34	19.334	
7,744.0	7,351.0	7,522.2	7,346.0	40.4	27.8	-135.48	1,248.9	-43.1	954.0	904.7	49.38	19.320	

Company:	Great Western	Local Co-ordinate Reference:	Well Fritzler 17-42-11
Project:	SEC.17-T6N-R66W	TVD Reference:	WELL @ 4785.0ft (Original Well Elev)
Reference Site:	Fritzler 17-23-18 Pad Sec.17-T6N-R66W	MD Reference:	WELL @ 4785.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Fritzler 17-42-11	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (6-26-12)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 82-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	121.11	-70.7	117.1	136.8					
100.0	100.0	101.9	101.9	0.1	0.1	121.00	-70.1	116.6	136.1	135.8	0.25	543.445		
200.0	200.0	203.6	203.5	0.3	0.4	120.68	-68.4	115.3	134.1	133.4	0.70	190.658		
300.0	300.0	305.2	305.1	0.6	0.6	103.93	-67.5	111.9	131.2	130.0	1.15	114.268		
400.0	399.8	404.7	404.4	0.8	0.8	108.68	-69.9	105.3	128.5	126.9	1.60	80.277		
430.3	430.1	434.2	433.7	0.9	0.9	110.79	-71.4	103.0	128.3	126.6	1.75	73.433 CC, ES		
500.0	499.5	500.7	499.8	1.0	1.1	116.35	-75.9	97.5	129.8	127.7	2.09	62.093		
600.0	598.7	595.9	594.5	1.3	1.3	125.06	-84.0	90.4	137.6	135.0	2.63	52.228		
700.0	697.5	690.2	688.0	1.6	1.6	133.64	-93.4	83.6	152.3	149.1	3.20	47.612		
800.0	795.6	786.7	783.8	2.0	1.9	141.45	-103.6	76.9	173.4	169.7	3.74	46.401 SF		
900.0	893.1	884.3	880.7	2.4	2.1	148.13	-112.2	69.7	198.3	194.1	4.23	46.890		
1,000.0	989.6	978.6	974.5	2.9	2.4	153.36	-119.4	63.1	227.3	222.6	4.70	48.359		
1,100.0	1,085.3	1,075.6	1,071.0	3.5	2.6	157.62	-126.1	57.1	260.2	255.0	5.16	50.418		
1,200.0	1,179.8	1,170.5	1,165.7	4.1	2.8	160.97	-130.9	51.7	295.6	290.0	5.61	52.671		
1,300.0	1,273.2	1,267.8	1,262.8	4.7	3.1	163.58	-134.8	47.6	333.8	327.8	6.06	55.117		
1,391.7	1,357.6	1,354.1	1,349.0	5.4	3.2	165.40	-136.8	45.0	370.6	364.1	6.47	57.308		
1,400.0	1,365.2	1,361.7	1,356.6	5.5	3.3	165.59	-137.0	44.6	374.0	367.5	6.50	57.496		
1,500.0	1,456.7	1,445.0	1,439.6	6.2	3.5	167.84	-139.1	38.0	416.6	409.6	6.98	59.644		
1,600.0	1,548.2	1,521.6	1,515.6	7.0	3.7	169.96	-142.5	28.8	461.9	454.4	7.47	61.795		
1,700.0	1,639.6	1,597.8	1,591.1	7.7	3.9	171.72	-147.1	19.6	509.1	501.2	7.97	63.858		
1,800.0	1,731.1	1,665.0	1,657.5	8.5	4.1	173.06	-153.0	11.1	559.3	550.9	8.46	66.087		
1,900.0	1,822.6	1,734.3	1,725.6	9.3	4.4	174.33	-160.9	1.2	612.3	603.3	8.97	68.243		
2,000.0	1,914.1	1,823.4	1,813.0	10.1	4.7	175.76	-172.1	-12.2	666.6	657.1	9.51	70.123		
2,100.0	2,005.5	1,901.8	1,890.1	10.9	5.0	176.75	-181.5	-22.9	720.4	710.4	10.02	71.897		
2,200.0	2,097.0	1,981.8	1,968.6	11.6	5.3	177.64	-192.1	-34.3	775.5	764.9	10.54	73.586		
2,300.0	2,188.5	2,070.6	2,055.9	12.4	5.7	178.42	-203.5	-45.9	829.9	818.9	11.08	74.906		
2,400.0	2,279.9	2,147.2	2,131.0	13.2	5.9	179.10	-213.2	-57.0	884.8	873.2	11.60	76.289		
2,500.0	2,371.4	2,225.6	2,207.9	14.0	6.3	179.76	-223.4	-69.1	940.3	928.1	12.14	77.479		
2,600.0	2,462.9	2,310.7	2,291.2	14.8	6.6	-179.64	-234.7	-81.7	995.9	983.3	12.68	78.514		
2,700.0	2,554.4	2,390.3	2,369.3	15.5	6.9	-179.17	-245.5	-92.9	1,051.6	1,038.4	13.22	79.539		
2,800.0	2,645.8	2,461.0	2,438.6	16.3	7.2	-178.80	-255.5	-102.9	1,107.9	1,094.1	13.74	80.604		
2,900.0	2,737.3	2,528.7	2,504.7	17.1	7.5	-178.47	-265.9	-112.9	1,165.3	1,151.0	14.26	81.689		
3,000.0	2,828.8	2,607.0	2,581.1	17.9	7.8	-178.11	-278.2	-124.8	1,223.1	1,208.3	14.81	82.581		
3,100.0	2,920.2	2,669.7	2,642.1	18.7	8.1	-177.83	-288.5	-134.8	1,281.8	1,266.4	15.33	83.634		
3,200.0	3,011.7	2,746.5	2,716.6	19.5	8.5	-177.49	-301.9	-147.6	1,341.4	1,325.6	15.87	84.510		
3,300.0	3,103.2	2,892.0	2,858.6	20.3	9.1	-176.99	-324.9	-169.5	1,399.7	1,383.1	16.56	84.527		
3,400.0	3,194.7	2,966.0	2,931.3	21.0	9.4	-176.82	-335.3	-178.9	1,455.6	1,438.5	17.08	85.222		
3,500.0	3,286.1	3,079.2	3,042.5	21.8	9.8	-176.64	-351.4	-192.0	1,511.3	1,493.7	17.68	85.462		
3,600.0	3,377.6	3,191.6	3,153.4	22.6	10.2	-176.45	-364.9	-204.7	1,565.2	1,546.9	18.28	85.617		
3,700.0	3,469.1	3,291.5	3,252.2	23.4	10.5	-176.32	-375.3	-214.8	1,617.4	1,598.5	18.85	85.782		
3,800.0	3,560.5	3,362.0	3,321.9	24.2	10.7	-176.26	-383.5	-221.7	1,670.4	1,651.1	19.37	86.242		
3,900.0	3,652.0	3,434.7	3,393.7	25.0	11.0	-176.22	-392.8	-228.4	1,724.2	1,704.3	19.89	86.701		
4,000.0	3,743.5	3,505.0	3,463.2	25.8	11.2	-176.20	-401.9	-234.4	1,778.0	1,757.6	20.40	87.167		
4,100.0	3,835.0	3,572.1	3,529.3	26.5	11.5	-176.18	-411.3	-240.6	1,832.7	1,811.8	20.90	87.677		
4,200.0	3,926.4	3,644.0	3,600.1	27.3	11.7	-176.12	-421.2	-248.2	1,887.8	1,866.4	21.42	88.115		
4,300.0	4,017.9	3,701.0	3,656.1	28.1	11.9	-176.05	-429.3	-255.2	1,943.8	1,921.9	21.92	88.663		
4,400.0	4,109.4	3,753.2	3,707.2	28.9	12.2	-175.97	-437.4	-262.4	2,001.1	1,978.7	22.41	89.282		
4,500.0	4,200.8	3,811.4	3,764.0	29.7	12.4	-175.88	-446.9	-270.9	2,059.5	2,036.5	22.92	89.838		
4,600.0	4,292.3	3,880.3	3,831.1	30.5	12.7	-175.76	-458.7	-281.4	2,118.6	2,095.1	23.46	90.310		
4,700.0	4,383.8	3,964.1	3,912.6	31.3	13.1	-175.65	-473.5	-293.7	2,177.9	2,153.9	24.03	90.651		
4,800.0	4,475.3	4,160.3	4,104.7	32.1	13.9	-175.49	-504.7	-318.2	2,235.6	2,210.8	24.82	90.077		
4,900.0	4,566.7	4,258.4	4,201.5	32.8	14.2	-175.46	-517.6	-327.9	2,290.0	2,264.6	25.39	90.186		

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

Company:	Great Western	Local Co-ordinate Reference:	Well Fritzier 17-42-11
Project:	SEC.17-T6N-R66W	TVD Reference:	WELL @ 4785.0ft (Original Well Elev)
Reference Site:	Fritzier 17-23-18 Pad Sec.17-T6N-R66W	MD Reference:	WELL @ 4785.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Fritzier 17-42-11	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (6-26-12)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 82-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
5,000.0	4,658.2	4,327.2	4,269.2	33.6	14.5	-175.42	-526.6	-335.3	2,344.6	2,318.7	25.91	90.491	
5,100.0	4,749.7	4,399.0	4,339.9	34.4	14.8	-175.36	-536.4	-343.9	2,400.0	2,373.5	26.44	90.763	
5,201.3	4,842.4	4,487.3	4,426.6	35.2	15.1	-175.26	-548.2	-355.7	2,456.3	2,429.3	27.02	90.890	
5,300.0	4,933.3	4,546.4	4,484.6	35.9	15.3	-175.28	-555.8	-364.1	2,509.7	2,482.0	27.68	90.654	
5,400.0	5,026.7	4,610.3	4,547.1	36.4	15.6	-175.29	-564.6	-373.5	2,561.8	2,533.5	28.31	90.505	
5,500.0	5,121.4	4,697.3	4,632.3	36.9	16.0	-175.26	-577.0	-386.3	2,611.2	2,582.3	28.95	90.207	
5,600.0	5,217.1	4,802.7	4,735.6	37.4	16.4	-175.18	-591.4	-402.2	2,657.3	2,627.8	29.59	89.799	
5,700.0	5,313.7	4,919.0	4,849.5	37.8	16.9	-175.08	-606.2	-419.6	2,699.4	2,669.2	30.22	89.317	
5,800.0	5,411.2	5,002.2	4,931.1	38.2	17.2	-175.01	-616.4	-432.3	2,738.1	2,707.4	30.73	89.105	
5,900.0	5,509.4	5,249.4	5,174.2	38.5	18.1	-174.68	-643.4	-467.6	2,773.4	2,741.8	31.62	87.710	
6,000.0	5,608.2	5,488.0	5,411.4	38.8	18.8	-174.52	-658.4	-488.5	2,797.3	2,765.0	32.35	86.460	
6,100.0	5,707.5	5,654.8	5,577.8	39.0	19.1	-174.46	-664.7	-498.4	2,815.0	2,782.2	32.83	85.732	
6,200.0	5,807.1	5,821.6	5,744.5	39.2	19.4	-174.44	-668.6	-503.5	2,826.8	2,793.5	33.25	85.004	
6,300.0	5,907.0	5,941.5	5,864.4	39.3	19.6	-174.45	-670.2	-505.3	2,833.6	2,800.1	33.51	84.569	
6,393.0	6,000.0	6,053.4	5,976.2	39.4	19.8	-156.47	-671.1	-506.6	2,836.2	2,802.5	33.69	84.174	
6,400.0	6,007.0	6,061.8	5,984.6	39.4	19.8	-156.46	-671.1	-506.7	2,836.2	2,802.5	33.72	84.115	
6,500.0	6,107.0	6,169.4	6,092.2	39.5	20.0	-156.45	-671.4	-507.6	2,836.8	2,802.8	34.06	83.292	
6,600.0	6,207.0	6,272.2	6,195.0	39.5	20.1	-156.43	-671.5	-508.6	2,837.3	2,802.9	34.39	82.501	
6,700.0	6,307.0	6,374.9	6,297.8	39.6	20.3	-156.41	-671.5	-509.6	2,837.7	2,802.9	34.72	81.719	
6,800.0	6,407.0	6,482.3	6,405.2	39.7	20.4	-156.39	-671.2	-510.7	2,837.9	2,802.8	35.07	80.914	
6,900.0	6,507.0	6,589.9	6,512.8	39.8	20.6	-156.36	-670.7	-511.9	2,837.8	2,802.4	35.42	80.114	
7,000.0	6,607.0	6,702.3	6,625.2	39.8	20.7	-156.34	-669.7	-513.0	2,837.4	2,801.6	35.78	79.299	
7,100.0	6,707.0	6,824.0	6,746.8	39.9	20.9	-156.31	-668.0	-513.7	2,836.4	2,800.2	36.16	78.443	
7,200.0	6,807.0	6,945.7	6,868.5	40.0	21.1	-156.29	-665.6	-513.8	2,834.6	2,798.1	36.54	77.582	
7,300.0	6,907.0	7,034.6	6,957.4	40.1	21.2	-156.28	-663.8	-513.6	2,832.6	2,795.8	36.85	76.863	
7,400.0	7,007.0	7,123.5	7,046.2	40.1	21.3	-156.26	-662.2	-513.7	2,831.1	2,793.9	37.17	76.165	
7,500.0	7,107.0	7,212.4	7,135.1	40.2	21.4	-156.24	-660.9	-514.1	2,829.9	2,792.4	37.49	75.487	
7,600.0	7,207.0	7,327.5	7,250.2	40.3	21.6	-156.21	-658.9	-515.1	2,828.7	2,790.8	37.86	74.710	
7,700.0	7,307.0	7,418.0	7,340.7	40.4	21.7	-156.16	-656.7	-516.5	2,827.0	2,788.8	38.20	74.012	
7,733.7	7,340.7	7,418.0	7,340.7	40.4	21.7	-156.16	-656.7	-516.5	2,826.8	2,788.6	38.25	73.903	
7,744.0	7,351.0	7,418.0	7,340.7	40.4	21.7	-156.16	-656.7	-516.5	2,826.9	2,788.6	38.27	73.872	

Company:	Great Western	Local Co-ordinate Reference:	Well Fritzier 17-42-11
Project:	SEC.17-T6N-R66W	TVD Reference:	WELL @ 4785.0ft (Original Well Elev)
Reference Site:	Fritzier 17-23-18 Pad Sec.17-T6N-R66W	MD Reference:	WELL @ 4785.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Fritzier 17-42-11	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (6-26-12)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 172-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	111.72	-71.0	178.3	191.9					
100.0	100.0	98.5	98.5	0.1	0.1	111.79	-71.4	178.6	192.3	192.1	0.22	856.994		
200.0	200.0	194.8	194.8	0.3	0.2	112.00	-72.5	179.5	193.6	193.0	0.59	329.176		
300.0	300.0	285.2	285.0	0.6	0.5	94.72	-75.4	183.4	199.0	198.0	1.04	191.792		
400.0	399.8	376.8	376.2	0.8	0.7	96.57	-81.1	190.2	208.9	207.3	1.51	137.965		
500.0	499.5	467.0	465.5	1.0	1.0	99.44	-90.1	199.3	223.7	221.6	2.01	111.406		
600.0	598.7	560.6	557.8	1.3	1.4	102.95	-101.3	210.0	242.0	239.5	2.53	95.469		
700.0	697.5	650.0	645.6	1.6	1.7	106.40	-113.0	221.8	264.5	261.4	3.08	85.902		
800.0	795.6	744.2	738.0	2.0	2.1	109.98	-126.0	235.2	290.5	286.8	3.67	79.253		
900.0	893.1	836.3	828.2	2.4	2.5	113.34	-138.7	248.5	319.1	314.9	4.28	74.606		
1,000.0	989.6	922.8	912.8	2.9	2.9	116.33	-151.4	261.7	351.6	346.7	4.92	71.475		
1,100.0	1,085.3	1,007.6	995.3	3.5	3.3	119.13	-165.1	275.1	388.5	382.9	5.60	69.411		
1,200.0	1,179.8	1,105.1	1,090.4	4.1	3.7	122.30	-181.0	289.8	428.0	421.7	6.29	68.034		
1,300.0	1,273.2	1,203.4	1,186.8	4.7	4.1	125.35	-195.5	302.5	468.3	461.4	6.98	67.080		
1,391.7	1,357.6	1,273.4	1,255.5	5.4	4.3	127.30	-206.2	311.0	508.2	500.6	7.63	66.630		
1,400.0	1,365.2	1,285.0	1,266.8	5.5	4.4	127.73	-208.1	312.4	512.1	504.4	7.69	66.583		
1,500.0	1,456.7	1,369.7	1,349.8	6.2	4.7	130.64	-221.7	322.6	558.4	550.0	8.40	66.435		
1,600.0	1,548.2	1,471.2	1,449.6	7.0	5.1	133.60	-236.4	334.0	604.2	595.1	9.10	66.398		
1,700.0	1,639.6	1,561.7	1,538.8	7.7	5.4	135.82	-247.9	343.9	649.3	639.5	9.78	66.365		
1,800.0	1,731.1	1,643.2	1,619.1	8.5	5.7	137.45	-257.8	354.0	695.1	684.6	10.48	66.319		
1,900.0	1,822.6	1,729.8	1,704.1	9.3	6.0	138.91	-268.6	365.7	741.9	730.7	11.19	66.320		
2,000.0	1,914.1	1,811.3	1,784.4	10.1	6.3	140.23	-279.1	375.5	789.1	777.2	11.87	66.490		
2,100.0	2,005.5	1,904.1	1,875.7	10.9	6.7	141.62	-291.8	386.4	837.1	824.6	12.55	66.695		
2,200.0	2,097.0	1,989.4	1,959.8	11.6	7.0	142.74	-302.4	396.1	884.3	871.1	13.23	66.860		
2,300.0	2,188.5	2,060.5	2,029.5	12.4	7.3	143.48	-311.8	406.1	933.0	919.1	13.90	67.122		
2,400.0	2,279.9	2,132.7	2,100.1	13.2	7.6	144.11	-322.1	417.4	983.2	968.6	14.60	67.353		
2,500.0	2,371.4	2,248.8	2,213.7	14.0	8.1	145.00	-337.9	435.5	1,032.8	1,017.5	15.36	67.225		
2,600.0	2,462.9	2,355.1	2,318.2	14.8	8.5	145.78	-349.6	450.5	1,079.9	1,063.9	16.09	67.128		
2,700.0	2,554.4	2,430.1	2,392.1	15.5	8.7	146.35	-358.1	460.0	1,127.3	1,110.6	16.75	67.299		
2,800.0	2,645.8	2,496.2	2,457.2	16.3	9.0	146.81	-366.6	468.7	1,176.2	1,158.7	17.41	67.570		
2,900.0	2,737.3	2,605.0	2,563.9	17.1	9.4	147.49	-380.8	483.4	1,225.4	1,207.2	18.14	67.550		
3,000.0	2,828.8	2,666.5	2,624.4	17.9	9.7	147.85	-388.7	491.7	1,274.4	1,255.6	18.78	67.850		
3,100.0	2,920.2	2,730.8	2,687.3	18.7	10.0	148.17	-398.1	501.0	1,325.2	1,305.7	19.44	68.170		
3,200.0	3,011.7	2,803.6	2,758.4	19.5	10.3	148.51	-409.6	512.0	1,377.1	1,357.0	20.12	68.441		
3,300.0	3,103.2	2,833.9	2,885.9	20.3	10.8	149.09	-428.5	530.8	1,427.9	1,407.0	20.90	68.310		
3,400.0	3,194.7	3,019.2	2,969.8	21.0	11.2	149.50	-439.5	541.4	1,477.1	1,455.5	21.57	68.470		
3,500.0	3,286.1	3,085.1	3,034.5	21.8	11.4	149.81	-449.0	549.7	1,527.5	1,505.3	22.21	68.791		
3,600.0	3,377.6	3,255.5	3,202.9	22.6	12.0	150.66	-468.6	567.1	1,574.6	1,551.6	22.98	68.514		
3,700.0	3,469.1	3,324.2	3,270.9	23.4	12.2	151.02	-475.8	572.9	1,621.3	1,597.8	23.58	68.754		
3,800.0	3,560.5	3,418.0	3,363.7	24.2	12.5	151.49	-486.5	580.8	1,669.0	1,644.8	24.21	68.924		
3,900.0	3,652.0	3,507.8	3,452.8	25.0	12.8	151.92	-496.0	588.1	1,715.9	1,691.0	24.84	69.072		
4,000.0	3,743.5	3,587.2	3,531.4	25.8	13.0	152.26	-504.6	595.4	1,763.2	1,737.7	25.46	69.257		
4,100.0	3,835.0	3,667.7	3,611.1	26.5	13.3	152.61	-513.7	602.0	1,810.9	1,784.9	26.07	69.460		
4,200.0	3,926.4	3,746.5	3,689.0	27.3	13.6	152.94	-522.9	608.5	1,859.1	1,832.4	26.68	69.679		
4,300.0	4,017.9	3,815.2	3,756.9	28.1	13.8	153.18	-531.4	615.2	1,907.9	1,880.6	27.29	69.913		
4,400.0	4,109.4	3,879.4	3,820.1	28.9	14.1	153.35	-539.8	622.7	1,957.6	1,929.7	27.91	70.137		
4,500.0	4,200.8	3,925.0	3,864.8	29.7	14.2	153.45	-546.2	628.8	2,008.5	1,980.0	28.50	70.475		
4,600.0	4,292.3	3,994.5	3,932.7	30.5	14.6	153.56	-556.7	639.1	2,060.5	2,031.3	29.17	70.645		
4,700.0	4,383.8	4,142.3	4,077.3	31.3	15.2	153.80	-579.1	660.6	2,112.6	2,082.6	30.02	70.376		
4,800.0	4,475.3	4,233.6	4,167.1	32.1	15.5	153.99	-590.8	671.8	2,162.1	2,131.4	30.70	70.437		
4,900.0	4,566.7	4,301.0	4,233.3	32.8	15.8	154.13	-600.6	680.1	2,213.1	2,181.8	31.32	70.654		
5,000.0	4,658.2	4,380.4	4,311.2	33.6	16.1	154.30	-612.7	689.4	2,264.8	2,232.8	31.97	70.842		

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

Survey Design Fritzler 17-23-18 Pad Sec.17-T6N-R66W - Fritzler 8-8-17 (Exist.) - Wellbore #1 - Wellbore #1													Offset Site Error: 0.0 ft	
Survey Program: 172-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth Depth (ft)	Vertical Depth Depth (ft)	Measured Depth Depth (ft)	Vertical Depth Depth (ft)	Reference (ft)	Offset (ft)	Highside Tooface (")	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
5,100.0	4,749.7	4,491.9	4,421.0	34.4	16.5	154.57	-628.2	700.9	2,315.2	2,282.5	32.66	70.899		
5,201.3	4,842.4	4,657.9	4,585.2	35.2	17.0	155.05	-648.3	714.2	2,364.7	2,331.3	33.39	70.814		
5,300.0	4,933.3	4,794.2	4,720.7	35.9	17.4	155.92	-661.4	720.2	2,409.1	2,375.0	34.09	70.678		
5,400.0	5,026.7	4,942.7	4,868.7	36.4	17.7	156.68	-671.7	726.5	2,448.6	2,413.9	34.75	70.474		
5,500.0	5,121.4	5,197.0	5,122.8	36.9	18.2	157.62	-680.9	731.8	2,483.1	2,447.6	35.47	69.998		
5,600.0	5,217.1	5,288.5	5,214.2	37.4	18.3	158.07	-680.8	732.0	2,510.1	2,474.1	35.96	69.803		
5,700.0	5,313.7	5,376.6	5,302.3	37.8	18.4	158.45	-681.1	731.8	2,534.3	2,497.9	36.40	69.626		
5,800.0	5,411.2	5,471.6	5,397.3	38.2	18.5	158.80	-681.6	731.5	2,555.6	2,518.8	36.80	69.440		
5,900.0	5,509.4	5,567.2	5,493.0	38.5	18.7	159.09	-682.2	731.1	2,573.8	2,536.6	37.16	69.256		
6,000.0	5,608.2	5,667.7	5,593.4	38.8	18.8	159.33	-682.9	730.6	2,588.9	2,551.4	37.49	69.063		
6,100.0	5,707.5	5,774.3	5,700.1	39.0	18.9	159.52	-683.3	730.1	2,600.5	2,562.7	37.77	68.845		
6,200.0	5,807.1	5,881.4	5,807.2	39.2	19.1	159.66	-683.5	729.7	2,608.6	2,570.5	38.02	68.616		
6,300.0	5,907.0	5,974.6	5,900.3	39.3	19.2	159.73	-683.6	729.4	2,613.3	2,575.1	38.20	68.409		
6,393.0	6,000.0	6,057.9	5,983.6	39.4	19.3	177.73	-684.0	729.3	2,615.1	2,576.8	38.33	68.230		
6,400.0	6,007.0	6,064.1	5,989.8	39.4	19.3	177.73	-684.0	729.3	2,615.2	2,576.8	38.35	68.199		
6,500.0	6,107.0	6,153.6	6,079.3	39.5	19.4	177.73	-684.8	729.4	2,616.0	2,577.4	38.61	67.754		
6,600.0	6,207.0	6,249.0	6,174.7	39.5	19.6	177.73	-685.9	729.7	2,617.2	2,578.3	38.90	67.288		
6,700.0	6,307.0	6,347.8	6,273.6	39.6	19.7	177.71	-687.1	730.4	2,618.5	2,579.3	39.19	66.807		
6,800.0	6,407.0	6,446.7	6,372.4	39.7	19.9	177.69	-688.3	731.5	2,619.8	2,580.3	39.50	66.328		
6,900.0	6,507.0	6,536.0	6,461.7	39.8	20.1	177.66	-689.6	732.7	2,621.3	2,581.5	39.79	65.877		
7,000.0	6,607.0	6,622.4	6,548.0	39.8	20.2	177.64	-691.3	733.8	2,623.2	2,583.2	40.08	65.450		
7,100.0	6,707.0	6,708.7	6,634.4	39.9	20.3	177.62	-693.4	734.8	2,625.7	2,585.4	40.37	65.040		
7,200.0	6,807.0	6,808.8	6,734.4	40.0	20.5	177.60	-696.3	735.7	2,628.6	2,588.0	40.69	64.607		
7,300.0	6,907.0	6,924.1	6,849.7	40.1	20.7	177.59	-699.1	736.7	2,631.1	2,590.1	41.03	64.127		
7,400.0	7,007.0	7,038.6	6,964.1	40.1	20.9	177.57	-701.2	737.5	2,633.0	2,591.6	41.37	63.641		
7,500.0	7,107.0	7,138.4	7,063.9	40.2	21.1	177.55	-702.8	738.4	2,634.6	2,592.9	41.70	63.185		
7,600.0	7,207.0	7,238.2	7,163.7	40.3	21.3	177.52	-704.4	739.8	2,636.3	2,594.2	42.02	62.732		
7,700.0	7,307.0	7,338.0	7,263.5	40.4	21.4	177.49	-705.9	741.5	2,637.9	2,595.6	42.35	62.282		
7,744.0	7,351.0	7,382.0	7,307.4	40.4	21.5	177.47	-706.6	742.4	2,638.6	2,596.1	42.50	62.084	SF	

Company:	Great Western	Local Co-ordinate Reference:	Well Fritzler 17-42-11
Project:	SEC.17-T6N-R66W	TVD Reference:	WELL @ 4785.0ft (Original Well Elev)
Reference Site:	Fritzler 17-23-18 Pad Sec.17-T6N-R66W	MD Reference:	WELL @ 4785.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Fritzler 17-42-11	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (6-26-12)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 200-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	119.32	-70.3	125.2	143.6					
100.0	100.0	99.8	99.8	0.1	0.1	119.26	-70.2	125.3	143.6	143.4	0.22	639.363		
200.0	200.0	199.7	199.7	0.3	0.2	119.05	-69.8	125.7	143.8	143.2	0.56	256.112 ES		
300.0	300.0	299.8	299.8	0.6	0.4	101.58	-69.6	126.1	144.3	143.3	0.99	145.707		
400.0	399.8	399.7	399.7	0.8	0.6	103.60	-69.7	126.2	145.6	144.2	1.43	102.068		
500.0	499.5	499.7	499.7	1.0	0.8	106.98	-70.0	125.9	147.9	146.0	1.88	78.480		
600.0	598.7	599.3	599.3	1.3	1.0	111.50	-70.2	125.4	151.6	149.3	2.37	64.025		
700.0	697.5	698.1	698.1	1.6	1.3	116.84	-70.4	124.7	157.7	154.8	2.88	54.677		
800.0	795.6	796.4	796.4	2.0	1.5	122.63	-70.4	124.0	166.9	163.4	3.42	48.763		
900.0	893.1	893.4	893.4	2.4	1.7	128.53	-70.5	123.4	179.9	175.9	3.97	45.335		
1,000.0	989.6	989.4	989.4	2.9	1.9	134.25	-70.8	122.7	197.3	192.8	4.51	43.725		
1,100.0	1,085.3	1,084.7	1,084.7	3.5	2.1	139.55	-71.3	122.0	219.3	214.3	5.05	43.448 SF		
1,200.0	1,179.8	1,178.8	1,178.8	4.1	2.3	144.24	-71.9	121.3	245.8	240.3	5.57	44.128		
1,300.0	1,273.2	1,272.4	1,272.4	4.7	2.5	148.34	-72.4	120.7	276.6	270.5	6.08	45.486		
1,391.7	1,357.6	1,357.5	1,357.5	5.4	2.6	151.58	-72.6	120.2	308.3	301.8	6.54	47.131		
1,400.0	1,365.2	1,365.2	1,365.1	5.5	2.7	151.88	-72.7	120.2	311.3	304.7	6.58	47.289		
1,500.0	1,456.7	1,457.0	1,457.0	6.2	2.8	155.07	-72.7	119.6	348.0	341.0	7.08	49.127		
1,600.0	1,548.2	1,548.7	1,548.6	7.0	3.0	157.66	-72.6	119.1	385.5	377.9	7.58	50.837		
1,700.0	1,639.6	1,640.0	1,640.0	7.7	3.2	159.77	-72.5	118.7	423.4	415.3	8.08	52.403		
1,800.0	1,731.1	1,730.9	1,730.9	8.5	3.4	161.50	-72.5	118.6	461.9	453.3	8.58	53.822		
1,900.0	1,822.6	1,822.2	1,822.1	9.3	3.6	162.94	-72.6	118.7	500.7	491.7	9.09	55.108		
2,000.0	1,914.1	1,914.6	1,914.5	10.1	3.8	164.18	-72.6	118.8	539.8	530.2	9.59	56.256		
2,100.0	2,005.5	2,006.9	2,006.8	10.9	4.0	165.27	-72.4	118.9	578.8	568.7	10.10	57.282		
2,200.0	2,097.0	2,096.2	2,096.1	11.6	4.2	166.19	-72.4	119.0	618.1	607.5	10.61	58.259		
2,300.0	2,188.5	2,185.2	2,185.1	12.4	4.4	167.02	-72.7	118.8	657.9	646.8	11.12	59.185		
2,400.0	2,279.9	2,275.1	2,275.1	13.2	4.6	167.76	-73.2	118.6	698.1	686.4	11.63	60.047		
2,500.0	2,371.4	2,365.2	2,365.1	14.0	4.7	168.44	-73.9	118.3	738.4	726.3	12.14	60.851		
2,600.0	2,462.9	2,456.0	2,455.9	14.8	4.9	169.05	-74.6	118.0	779.0	766.4	12.65	61.588		
2,700.0	2,554.4	2,547.3	2,547.3	15.5	5.1	169.62	-75.4	117.4	819.7	806.5	13.16	62.261		
2,800.0	2,645.8	2,638.9	2,638.8	16.3	5.3	170.15	-76.0	116.6	860.3	846.6	13.68	62.880		
2,900.0	2,737.3	2,730.8	2,730.7	17.1	5.5	170.65	-76.6	115.8	901.0	886.8	14.20	63.440		
3,000.0	2,828.8	2,822.9	2,822.8	17.9	5.7	171.11	-77.1	114.8	941.6	926.8	14.72	63.952		
3,100.0	2,920.2	2,915.4	2,915.4	18.7	5.9	171.53	-77.5	113.9	982.1	966.9	15.25	64.410		
3,200.0	3,011.7	3,008.2	3,008.1	19.5	6.1	171.92	-77.7	113.0	1,022.6	1,006.8	15.77	64.826		
3,300.0	3,103.2	3,100.9	3,100.9	20.3	6.3	172.27	-77.8	112.3	1,062.9	1,046.6	16.30	65.199		
3,400.0	3,194.7	3,193.8	3,193.7	21.0	6.5	172.60	-77.8	111.6	1,103.2	1,086.3	16.83	65.537		
3,500.0	3,286.1	3,285.5	3,285.4	21.8	6.7	172.89	-77.8	111.0	1,143.4	1,126.0	17.36	65.854		
3,600.0	3,377.6	3,377.1	3,377.0	22.6	6.9	173.16	-77.7	110.4	1,183.6	1,165.7	17.89	66.150		
3,700.0	3,469.1	3,470.0	3,469.9	23.4	7.1	173.42	-77.6	109.9	1,223.8	1,205.3	18.43	66.410		
3,800.0	3,560.5	3,563.6	3,563.5	24.2	7.3	173.65	-77.4	109.5	1,263.8	1,244.8	18.96	66.641		
3,900.0	3,652.0	3,656.1	3,656.0	25.0	7.5	173.87	-77.0	109.2	1,303.8	1,284.3	19.50	66.855		
4,000.0	3,743.5	3,747.9	3,747.8	25.8	7.7	174.07	-76.7	108.9	1,343.7	1,323.7	20.04	67.056		
4,100.0	3,835.0	3,840.2	3,840.1	26.5	7.9	174.26	-76.3	108.7	1,383.6	1,363.0	20.58	67.243		
4,200.0	3,926.4	3,933.1	3,933.0	27.3	8.1	174.44	-75.9	108.5	1,423.5	1,402.4	21.12	67.415		
4,300.0	4,017.9	4,025.7	4,025.6	28.1	8.3	174.61	-75.3	108.2	1,463.3	1,441.6	21.65	67.576		
4,400.0	4,109.4	4,117.4	4,117.3	28.9	8.5	174.77	-74.8	107.9	1,503.0	1,480.9	22.19	67.734		
4,500.0	4,200.8	4,208.9	4,208.8	29.7	8.6	174.92	-74.2	107.6	1,542.8	1,520.1	22.73	67.883		
4,600.0	4,292.3	4,298.9	4,298.8	30.5	8.8	175.06	-73.7	107.5	1,582.7	1,559.4	23.26	68.035		
4,700.0	4,383.8	4,388.8	4,388.7	31.3	9.0	175.18	-73.4	107.6	1,622.6	1,598.9	23.80	68.182		
4,800.0	4,475.3	4,479.6	4,479.5	32.1	9.2	175.29	-73.2	107.8	1,662.7	1,638.4	24.34	68.319		
4,900.0	4,566.7	4,570.4	4,570.3	32.8	9.4	175.39	-73.1	108.2	1,702.8	1,677.9	24.88	68.450		
5,000.0	4,658.2	4,667.0	4,666.9	33.6	9.6	175.49	-72.9	108.6	1,742.8	1,717.4	25.43	68.540		

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

Company:	Great Western	Local Co-ordinate Reference:	Well Fritzler 17-42-11
Project:	SEC.17-T6N-R66W	TVD Reference:	WELL @ 4785.0ft (Original Well Elev)
Reference Site:	Fritzler 17-23-18 Pad Sec.17-T6N-R66W	MD Reference:	WELL @ 4785.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Fritzler 17-42-11	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (6-26-12)	Offset TVD Reference:	Offset Datum

Offset Design												Offset Site Error:	0.0 ft
Survey Program: 200-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	4,749.7	4,766.6	4,766.5	34.4	9.8	175.59	-72.3	109.0	1,782.4	1,756.5	25.98	68.596	
5,201.3	4,842.4	4,861.1	4,861.0	35.2	10.0	175.69	-71.3	109.3	1,822.3	1,795.8	26.54	68.676	
5,300.0	4,933.3	4,950.4	4,950.3	35.9	10.2	175.84	-70.4	109.3	1,859.7	1,832.5	27.15	68.494	
5,400.0	5,026.7	5,040.6	5,040.5	36.4	10.4	175.98	-69.6	109.2	1,894.4	1,866.7	27.72	68.351	
5,500.0	5,121.4	5,130.0	5,129.8	36.9	10.6	176.09	-69.1	109.2	1,926.1	1,897.9	28.24	68.209	
5,600.0	5,217.1	5,223.4	5,223.2	37.4	10.8	176.18	-68.9	109.5	1,954.7	1,926.0	28.73	68.044	
5,700.0	5,313.7	5,329.0	5,328.9	37.8	11.0	176.26	-68.4	110.0	1,979.8	1,950.6	29.20	67.800	
5,800.0	5,411.2	5,429.5	5,429.4	38.2	11.2	176.32	-67.6	110.5	2,001.1	1,971.5	29.62	67.562	
5,900.0	5,509.4	5,518.1	5,518.0	38.5	11.4	176.36	-67.1	111.1	2,019.3	1,989.3	29.97	67.386	
6,000.0	5,608.2	5,600.0	5,599.9	38.8	11.6	176.38	-67.1	111.8	2,034.5	2,004.2	30.25	67.250	
6,100.0	5,707.5	5,696.2	5,696.0	39.0	11.8	176.40	-67.5	112.3	2,046.7	2,016.2	30.52	67.069	
6,200.0	5,807.1	5,785.4	5,785.3	39.2	11.9	176.43	-68.2	112.1	2,055.9	2,025.2	30.72	66.933	
6,300.0	5,907.0	5,890.1	5,890.0	39.3	12.2	176.45	-69.2	111.7	2,061.9	2,031.0	30.90	66.721	
6,393.0	6,000.0	5,990.4	5,990.3	39.4	12.4	-165.58	-69.9	112.0	2,064.0	2,033.0	31.04	66.490	
6,400.0	6,007.0	5,997.9	5,997.8	39.4	12.4	-165.59	-70.0	112.0	2,064.1	2,033.0	31.07	66.438	
6,500.0	6,107.0	6,097.2	6,097.1	39.5	12.6	-165.60	-70.6	112.6	2,064.5	2,033.1	31.42	65.706	
6,600.0	6,207.0	6,196.3	6,196.2	39.5	12.8	-165.62	-71.2	112.9	2,065.0	2,033.2	31.77	64.990	
6,700.0	6,307.0	6,291.2	6,291.1	39.6	13.0	-165.63	-71.9	113.1	2,065.7	2,033.5	32.12	64.316	
6,800.0	6,407.0	6,386.0	6,385.8	39.7	13.2	-165.64	-72.8	113.3	2,066.6	2,034.1	32.46	63.661	
6,900.0	6,507.0	6,491.3	6,491.1	39.8	13.4	-165.65	-73.8	113.4	2,067.5	2,034.7	32.83	62.974	
7,000.0	6,607.0	6,598.5	6,598.3	39.8	13.6	-165.65	-74.4	113.2	2,068.1	2,034.9	33.21	62.282	
7,100.0	6,707.0	6,706.0	6,705.9	39.9	13.9	-165.64	-74.6	112.8	2,068.3	2,034.7	33.58	61.585	
7,200.0	6,807.0	6,813.5	6,813.3	40.0	14.1	-165.63	-74.4	112.5	2,068.2	2,034.2	33.97	60.892	
7,300.0	6,907.0	6,920.0	6,919.9	40.1	14.3	-165.62	-73.9	112.5	2,067.7	2,033.4	34.35	60.200	
7,400.0	7,007.0	7,043.5	7,043.4	40.1	14.6	-165.64	-72.8	113.2	2,066.8	2,032.1	34.77	59.446	
7,492.8	7,099.8	7,100.0	7,099.8	40.2	14.7	-165.64	-71.6	113.7	2,065.2	2,030.2	35.04	58.945	
7,500.0	7,107.0	7,100.0	7,099.8	40.2	14.7	-165.64	-71.6	113.7	2,065.2	2,030.2	35.05	58.926	
7,600.0	7,207.0	7,100.0	7,099.8	40.3	14.7	-165.64	-71.6	113.7	2,068.0	2,032.8	35.21	58.738	
7,700.0	7,307.0	7,100.0	7,099.8	40.4	14.7	-165.64	-71.6	113.7	2,075.6	2,040.2	35.37	58.686	
7,744.0	7,351.0	7,100.0	7,099.8	40.4	14.7	-165.64	-71.6	113.7	2,080.4	2,045.0	35.44	58.705	

Company:	Great Western	Local Co-ordinate Reference:	Well Fritzler 17-42-11
Project:	SEC.17-T6N-R66W	TVD Reference:	WELL @ 4785.0ft (Original Well Elev)
Reference Site:	Fritzler 17-23-18 Pad Sec.17-T6N-R66W	MD Reference:	WELL @ 4785.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Fritzler 17-42-11	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (6-26-12)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 82-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	118.09	-71.4	133.8	151.7					
100.0	100.0	101.6	101.6	0.1	0.1	117.23	-69.1	134.2	151.0	150.7	0.25	592.324		
200.0	200.0	200.3	200.1	0.3	0.4	115.28	-64.2	135.9	150.3	149.5	0.72	210.009		
202.7	202.7	202.9	202.7	0.3	0.4	97.25	-64.0	135.9	150.3	149.5	0.73	206.315 CC, ES		
300.0	300.0	296.2	295.9	0.6	0.6	95.70	-59.3	139.2	151.5	150.4	1.17	129.668		
400.0	399.8	390.1	389.5	0.8	0.8	95.46	-56.3	145.3	156.7	155.1	1.63	96.258		
500.0	499.5	487.0	486.0	1.0	1.1	97.02	-56.2	153.8	165.6	163.5	2.10	78.866		
600.0	598.7	581.1	579.8	1.3	1.3	100.61	-59.8	160.9	176.1	173.5	2.58	68.200		
700.0	697.5	672.4	670.2	1.6	1.5	105.01	-67.0	170.6	192.8	189.7	3.10	62.131		
800.0	795.6	766.0	762.9	2.0	1.8	110.19	-77.0	180.1	213.4	209.7	3.69	57.846		
900.0	893.1	858.3	853.6	2.4	2.1	116.47	-92.2	186.2	239.0	234.8	4.25	56.250		
1,000.0	989.6	955.9	949.3	2.9	2.3	123.61	-111.0	187.7	268.5	263.6	4.83	55.614 SF		
1,100.0	1,085.3	1,057.4	1,048.9	3.5	2.6	131.05	-130.2	182.6	300.3	294.9	5.37	55.921		
1,200.0	1,179.8	1,147.0	1,136.7	4.1	2.8	137.30	-145.7	173.4	335.3	329.4	5.89	56.938		
1,300.0	1,273.2	1,223.3	1,210.8	4.7	3.1	142.33	-160.7	163.0	377.6	371.2	6.39	59.050		
1,391.7	1,357.6	1,292.0	1,276.9	5.4	3.3	146.54	-175.8	152.0	423.1	416.2	6.85	61.768		
1,400.0	1,365.2	1,292.0	1,276.9	5.5	3.3	146.54	-175.8	152.0	427.4	420.6	6.89	62.039		
1,500.0	1,456.7	1,362.1	1,343.7	6.2	3.6	151.02	-192.6	139.1	482.7	475.3	7.38	65.406		
1,600.0	1,548.2	1,428.9	1,406.8	7.0	4.0	154.74	-209.9	125.6	541.7	533.9	7.82	69.282		
1,700.0	1,639.6	1,495.0	1,469.0	7.7	4.3	157.85	-227.7	112.2	603.2	595.0	8.27	72.904		
1,800.0	1,731.1	1,556.0	1,526.1	8.5	4.6	160.31	-245.1	99.8	667.2	658.5	8.72	76.504		
1,900.0	1,822.6	1,618.1	1,584.0	9.3	5.0	162.47	-263.7	87.1	733.3	724.2	9.16	80.045		
2,000.0	1,914.1	1,679.1	1,640.7	10.1	5.4	164.24	-282.8	75.2	800.9	791.3	9.61	83.354		
2,100.0	2,005.5	1,734.2	1,691.7	10.9	5.7	165.60	-300.8	64.8	870.1	860.0	10.06	86.516		
2,200.0	2,097.0	1,787.2	1,740.5	11.6	6.1	166.76	-319.1	54.8	940.8	930.3	10.51	89.542		
2,300.0	2,188.5	1,838.2	1,787.1	12.4	6.5	167.76	-337.5	45.1	1,013.0	1,002.1	10.96	92.439		
2,400.0	2,279.9	1,888.1	1,832.3	13.2	6.9	168.64	-356.2	35.5	1,086.6	1,075.1	11.41	95.231		
2,500.0	2,371.4	1,936.7	1,876.2	14.0	7.2	169.37	-375.2	26.6	1,161.2	1,149.4	11.86	97.903		
2,600.0	2,462.9	1,990.5	1,924.4	14.8	7.7	170.07	-396.9	17.2	1,236.9	1,224.5	12.32	100.401		
2,700.0	2,554.4	2,047.7	1,975.7	15.5	8.1	170.68	-420.6	7.9	1,313.0	1,300.2	12.78	102.715		
2,800.0	2,645.8	2,124.9	2,045.0	16.3	8.7	171.28	-452.8	-2.5	1,389.1	1,375.8	13.27	104.644		
2,900.0	2,737.3	2,171.9	2,087.3	17.1	9.0	171.54	-472.7	-7.7	1,465.2	1,451.5	13.73	106.736		
3,000.0	2,828.8	2,229.0	2,138.2	17.9	9.5	171.80	-497.9	-13.6	1,542.4	1,528.2	14.20	108.618		
3,100.0	2,920.2	2,291.7	2,194.1	18.7	10.0	172.01	-525.8	-19.5	1,619.8	1,605.1	14.68	110.323		
3,200.0	3,011.7	2,380.9	2,274.1	19.5	10.6	172.26	-564.4	-26.9	1,696.2	1,681.0	15.21	111.541		
3,300.0	3,103.2	2,452.4	2,338.6	20.3	11.1	172.46	-594.6	-33.3	1,772.0	1,756.3	15.70	112.850		
3,400.0	3,194.7	2,513.7	2,393.8	21.0	11.5	172.66	-620.3	-39.7	1,847.8	1,831.6	16.18	114.191		
3,500.0	3,286.1	2,585.0	2,458.2	21.8	12.1	172.92	-650.0	-48.0	1,923.6	1,906.9	16.68	115.294		
3,600.0	3,377.6	2,644.5	2,511.8	22.6	12.5	173.15	-674.5	-55.7	1,999.3	1,982.2	17.17	116.466		
3,700.0	3,469.1	2,703.0	2,564.4	23.4	13.0	173.37	-698.9	-63.5	2,075.4	2,057.8	17.65	117.596		
3,800.0	3,560.5	2,738.0	2,595.8	24.2	13.3	173.51	-713.7	-68.3	2,152.0	2,134.0	18.09	118.951		
3,900.0	3,652.0	2,775.8	2,629.5	25.0	13.6	173.65	-730.0	-73.8	2,229.4	2,210.9	18.54	120.251		
4,000.0	3,743.5	2,798.0	2,649.1	25.8	13.8	173.74	-739.7	-77.2	2,307.6	2,288.7	18.96	121.740		
4,100.0	3,835.0	2,851.4	2,696.2	26.5	14.3	173.93	-763.6	-85.3	2,386.3	2,366.9	19.44	122.767		
4,200.0	3,926.4	2,893.0	2,732.6	27.3	14.6	174.07	-782.7	-91.6	2,465.7	2,445.8	19.90	123.932		
4,300.0	4,017.9	3,082.0	2,900.6	28.1	16.1	174.57	-865.2	-117.6	2,542.7	2,522.1	20.63	123.275		
4,400.0	4,109.4	3,135.3	2,948.6	28.9	16.5	174.72	-887.2	-125.1	2,618.9	2,597.8	21.11	124.089		
4,500.0	4,200.8	3,174.0	2,983.1	29.7	16.8	174.82	-903.7	-130.7	2,696.0	2,674.4	21.55	125.082		
4,600.0	4,292.3	3,233.1	3,035.8	30.5	17.3	174.95	-929.3	-139.0	2,773.4	2,751.4	22.05	125.774		
4,700.0	4,383.8	3,302.6	3,097.8	31.3	17.9	175.08	-959.4	-148.0	2,850.8	2,828.2	22.57	126.308		
4,800.0	4,475.3	3,372.2	3,159.8	32.1	18.4	175.18	-989.6	-156.5	2,927.9	2,904.8	23.09	126.823		
4,900.0	4,566.7	3,435.6	3,216.6	32.8	18.9	175.27	-1,017.1	-164.1	3,005.1	2,981.5	23.59	127.372		

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

Company:	Great Western	Local Co-ordinate Reference:	Well Fritzler 17-42-11
Project:	SEC.17-T6N-R66W	TVD Reference:	WELL @ 4785.0ft (Original Well Elev)
Reference Site:	Fritzler 17-23-18 Pad Sec.17-T6N-R66W	MD Reference:	WELL @ 4785.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Fritzler 17-42-11	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (6-26-12)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 82-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		
5,000.0	4,658.2	3,494.8	3,269.3	33.6	19.4	175.34	-1,042.7	-171.0	3,082.2	3,058.1	24.09	127.938		
5,100.0	4,749.7	3,550.0	3,318.6	34.4	19.9	175.41	-1,066.8	-177.6	3,159.5	3,135.0	24.58	128.529		
5,201.3	4,842.4	3,612.8	3,374.6	35.2	20.4	175.49	-1,094.1	-185.5	3,238.0	3,212.9	25.10	129.023		
5,300.0	4,933.3	3,794.5	3,538.4	35.9	21.8	175.87	-1,169.5	-207.5	3,311.2	3,285.1	26.05	127.111		
5,400.0	5,026.7	3,843.8	3,583.0	36.4	22.2	176.07	-1,189.5	-213.6	3,383.0	3,356.3	26.68	126.820		
5,500.0	5,121.4	3,895.7	3,630.0	36.9	22.6	176.25	-1,210.8	-220.3	3,452.8	3,425.5	27.28	126.559		
5,600.0	5,217.1	3,925.0	3,656.3	37.4	22.8	176.39	-1,222.9	-224.1	3,520.5	3,492.8	27.79	126.676		
5,700.0	5,313.7	3,958.7	3,686.5	37.8	23.1	176.53	-1,237.2	-228.7	3,586.6	3,558.4	28.28	126.835		
5,800.0	5,411.2	3,982.1	3,707.3	38.2	23.3	176.65	-1,247.5	-231.9	3,651.2	3,622.5	28.69	127.254		
5,900.0	5,509.4	4,020.0	3,740.6	38.5	23.6	176.77	-1,264.7	-237.4	3,714.4	3,685.3	29.11	127.603		
6,000.0	5,608.2	4,020.0	3,740.6	38.8	23.6	176.85	-1,264.7	-237.4	3,775.8	3,746.4	29.36	128.595		
6,100.0	5,707.5	4,068.7	3,782.9	39.0	24.1	176.96	-1,287.7	-244.5	3,835.4	3,805.7	29.73	129.007		
6,200.0	5,807.1	4,114.0	3,821.9	39.2	24.5	177.04	-1,309.9	-250.9	3,893.2	3,863.2	30.05	129.574		
6,300.0	5,907.0	4,163.3	3,864.1	39.3	25.0	177.12	-1,334.4	-257.7	3,948.9	3,918.6	30.33	130.192		
6,393.0	6,000.0	4,529.8	4,183.8	39.4	28.1	-164.93	-1,508.3	-299.8	3,996.3	3,964.7	31.64	126.286		
6,400.0	6,007.0	4,534.5	4,188.0	39.4	28.1	-164.93	-1,510.3	-300.2	3,999.5	3,967.8	31.67	126.287		
6,500.0	6,107.0	4,588.0	4,235.6	39.5	28.5	-164.94	-1,534.1	-306.2	4,045.2	4,013.3	31.99	126.436		
6,600.0	6,207.0	4,666.9	4,311.9	39.5	38.0	-164.93	-2,015.5	-436.1	4,085.9	4,048.8	37.15	109.986		
6,700.0	6,307.0	4,692.1	4,345.1	39.6	38.1	-164.93	-2,017.7	-436.7	4,087.8	4,050.3	37.48	109.052		
6,800.0	6,407.0	4,794.2	4,347.2	39.7	38.2	-164.93	-2,019.0	-437.0	4,089.1	4,051.3	37.79	108.212		
6,900.0	6,507.0	4,874.3	4,427.3	39.8	38.3	-164.93	-2,020.3	-437.5	4,090.8	4,052.8	38.06	107.481		
7,000.0	6,607.0	4,954.4	4,507.4	39.8	38.4	-164.92	-2,021.9	-438.4	4,093.0	4,054.7	38.33	106.770		
7,100.0	6,707.0	5,037.0	4,590.0	39.9	38.5	-164.91	-2,023.8	-439.7	4,095.7	4,057.1	38.61	106.069		
7,200.0	6,807.0	5,151.3	4,670.4	40.0	38.6	-164.89	-2,026.5	-441.9	4,098.4	4,059.5	38.95	105.227		
7,300.0	6,907.0	5,269.5	4,822.3	40.1	38.8	-164.87	-2,028.6	-444.2	4,100.7	4,061.4	39.29	104.371		
7,400.0	7,007.0	5,384.0	4,936.8	40.1	38.9	-164.85	-2,030.2	-446.5	4,102.6	4,062.9	39.63	103.530		
7,500.0	7,107.0	5,495.9	5,048.7	40.2	39.0	-164.82	-2,031.4	-449.0	4,104.1	4,064.2	39.96	102.702		
7,600.0	7,207.0	5,607.0	5,159.8	40.3	39.1	-164.78	-2,032.1	-451.8	4,105.4	4,065.1	40.30	101.883		
7,700.0	7,307.0	5,666.0	5,218.8	40.4	39.2	-164.76	-2,032.4	-453.3	4,106.8	4,066.2	40.55	101.281		
7,744.0	7,351.0	5,666.0	5,218.8	40.4	39.2	-164.76	-2,032.4	-453.3	4,107.9	4,067.3	40.62	101.132		

Company:	Great Western	Local Co-ordinate Reference:	Well Fritzler 17-42-11
Project:	SEC.17-T6N-R66W	TVD Reference:	WELL @ 4785.0ft (Original Well Elev)
Reference Site:	Fritzler 17-23-18 Pad Sec.17-T6N-R66W	MD Reference:	WELL @ 4785.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Fritzler 17-42-11	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (6-26-12)	Offset TVD Reference:	Offset Datum

Offset Design													Offset Site Error:	0.0 ft
Survey Program: 82-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	113.48	-70.7	162.7	177.4					
100.0	100.0	106.0	105.9	0.1	0.2	112.78	-67.6	161.1	174.8	174.5	0.27	647.383		
180.8	180.8	181.0	180.8	0.3	0.3	111.47	-63.5	161.3	173.4	172.7	0.62	277.652 CC, ES		
200.0	200.0	198.4	198.2	0.3	0.4	111.09	-62.4	161.8	173.5	172.7	0.71	243.351		
300.0	300.0	289.4	288.8	0.6	0.6	91.32	-57.1	167.4	177.2	176.1	1.17	151.400		
400.0	399.8	383.4	382.2	0.8	0.9	90.48	-53.1	177.2	185.8	184.2	1.66	112.182		
500.0	499.5	484.2	482.1	1.0	1.2	89.92	-46.5	189.2	195.0	192.9	2.18	89.411		
600.0	598.7	589.3	585.9	1.3	1.5	89.48	-36.0	201.5	203.2	200.4	2.78	73.197		
700.0	697.5	693.9	689.0	1.6	1.9	89.19	-21.3	211.4	207.8	204.4	3.45	60.218		
800.0	795.6	789.6	783.1	2.0	2.2	89.48	-6.5	220.6	212.2	208.1	4.16	50.962		
900.0	893.1	886.3	878.3	2.4	2.6	91.02	6.2	231.7	219.1	214.1	4.93	44.462		
1,000.0	989.6	984.1	974.7	2.9	2.9	93.41	18.5	243.4	227.0	221.3	5.77	39.369		
1,100.0	1,085.3	1,083.8	1,072.7	3.5	3.3	96.25	31.8	255.8	235.9	229.2	6.68	35.310		
1,200.0	1,179.8	1,181.9	1,169.2	4.1	3.7	99.71	44.6	267.7	245.7	238.1	7.64	32.154		
1,300.0	1,273.2	1,281.3	1,266.9	4.7	4.0	103.53	58.2	279.7	257.1	248.4	8.65	29.711		
1,391.7	1,357.6	1,368.5	1,352.9	5.4	4.3	107.44	69.0	289.5	269.4	259.8	9.55	28.205		
1,400.0	1,365.2	1,377.0	1,361.3	5.5	4.4	107.87	69.9	290.4	270.7	261.0	9.63	28.093		
1,500.0	1,456.7	1,479.4	1,462.4	6.2	4.7	112.80	82.3	300.4	285.5	275.0	10.59	26.961		
1,600.0	1,548.2	1,573.2	1,555.1	7.0	5.0	116.93	93.8	308.8	301.5	290.0	11.47	26.282		
1,700.0	1,639.6	1,662.8	1,643.7	7.7	5.3	120.41	104.1	318.1	320.4	308.1	12.31	26.031 SF		
1,800.0	1,731.1	1,763.6	1,743.5	8.5	5.7	124.17	114.5	327.3	340.7	327.6	13.08	26.037		
1,900.0	1,822.6	1,860.3	1,839.2	9.3	6.0	127.39	124.9	335.7	361.6	347.8	13.81	26.182		
2,000.0	1,914.1	1,964.9	1,942.5	10.1	6.3	130.27	138.5	345.1	381.8	367.2	14.55	26.234		
2,100.0	2,005.5	2,058.3	2,034.7	10.9	6.7	132.55	151.0	353.5	402.4	387.1	15.26	26.361		
2,200.0	2,097.0	2,153.3	2,128.5	11.6	7.0	134.59	163.5	362.7	424.1	408.1	15.97	26.549		
2,300.0	2,188.5	2,249.4	2,223.0	12.4	7.4	136.26	176.4	373.4	446.6	429.9	16.71	26.727		
2,400.0	2,279.9	2,348.1	2,320.2	13.2	7.7	137.79	190.1	384.5	469.0	451.6	17.44	26.892		
2,500.0	2,371.4	2,442.6	2,413.1	14.0	8.1	139.09	203.2	395.3	491.9	473.7	18.17	27.074		
2,600.0	2,462.9	2,535.2	2,504.1	14.8	8.4	140.16	215.8	407.0	515.5	496.6	18.91	27.264		
2,700.0	2,554.4	2,628.3	2,595.9	15.5	8.8	141.28	227.2	417.7	540.3	520.7	19.61	27.553		
2,800.0	2,645.8	2,728.5	2,694.5	16.3	9.2	142.29	240.2	430.2	564.9	544.6	20.34	27.779		
2,900.0	2,737.3	2,821.2	2,785.7	17.1	9.5	143.15	252.2	441.5	589.6	568.5	21.04	28.024		
3,000.0	2,828.8	2,912.1	2,875.7	17.9	9.8	144.25	261.9	449.9	615.6	594.0	21.65	28.442		
3,100.0	2,920.2	3,017.6	2,980.0	18.7	10.2	145.37	274.2	459.8	641.0	618.7	22.27	28.788		
3,200.0	3,011.7	3,116.4	3,077.6	19.5	10.5	146.32	286.4	469.1	666.0	643.1	22.89	29.094		
3,300.0	3,103.2	3,211.4	3,171.3	20.3	10.8	147.13	298.7	478.4	690.7	667.2	23.52	29.361		
3,400.0	3,194.7	3,303.8	3,262.6	21.0	11.2	147.88	309.7	487.4	716.4	692.2	24.15	29.665		
3,500.0	3,286.1	3,401.5	3,359.1	21.8	11.5	148.60	321.6	497.2	742.0	717.2	24.78	29.939		
3,600.0	3,377.6	3,497.8	3,454.3	22.6	11.8	149.29	333.3	506.5	767.8	742.4	25.41	30.218		
3,700.0	3,469.1	3,590.4	3,545.8	23.4	12.1	149.92	344.4	515.2	793.7	767.7	26.02	30.509		
3,800.0	3,560.5	3,695.3	3,649.8	24.2	12.5	150.78	356.2	522.7	820.1	793.5	26.57	30.865		
3,900.0	3,652.0	3,824.2	3,776.8	25.0	12.9	151.55	374.9	534.0	843.7	816.5	27.23	30.990		
4,000.0	3,743.5	3,923.9	3,874.1	25.8	13.4	151.85	392.0	546.3	865.3	837.4	27.98	30.928		
4,100.0	3,835.0	4,014.0	3,961.6	26.5	13.8	151.85	407.9	561.1	887.1	858.3	28.83	30.772		
4,200.0	3,926.4	4,097.8	4,043.0	27.3	14.2	151.85	421.8	575.2	910.0	880.3	29.64	30.697		
4,300.0	4,017.9	4,196.3	4,139.5	28.1	14.6	152.05	436.7	588.7	933.9	903.5	30.41	30.707		
4,400.0	4,109.4	4,320.9	4,260.9	28.9	15.1	152.24	458.0	606.3	955.7	924.4	31.30	30.537		
4,500.0	4,200.8	4,402.9	4,340.3	29.7	15.5	152.15	472.7	621.1	977.4	945.3	32.15	30.399		
4,600.0	4,292.3	4,494.6	4,428.9	30.5	16.0	152.01	488.3	638.6	1,000.1	967.1	33.07	30.239		
4,700.0	4,383.8	4,583.0	4,514.8	31.3	16.4	151.98	502.4	653.9	1,023.6	989.7	33.92	30.176		
4,800.0	4,475.3	4,656.5	4,586.8	32.1	16.7	152.09	512.7	664.6	1,048.6	1,014.0	34.63	30.283		
4,900.0	4,566.7	4,735.9	4,665.1	32.8	16.9	152.34	522.0	673.9	1,075.6	1,040.3	35.27	30.492		

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

Company:	Great Western	Local Co-ordinate Reference:	Well Fritzler 17-42-11
Project:	SEC.17-T6N-R66W	TVD Reference:	WELL @ 4785.0ft (Original Well Elev)
Reference Site:	Fritzler 17-23-18 Pad Sec.17-T6N-R66W	MD Reference:	WELL @ 4785.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Fritzler 17-42-11	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
Reference Design:	Plan #1 (6-26-12)	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4785.0ft (Original Well Elev) Coordinates are relative to: Fritzler 17-42-11
 Offset Depths are relative to Offset Datum
 Central Meridian is -105.500000 °
 Coordinate System is US State Plane 1983, Colorado Northern Zone
 Grid Convergence at Surface is: 0.46°



Company:	Great Western	Local Co-ordinate Reference:	Well Fritzler 17-42-11
Project:	SEC.17-T6N-R66W	TVD Reference:	WELL @ 4785.0ft (Original Well Elev)
Reference Site:	Fritzler 17-23-18 Pad Sec.17-T6N-R66W	MD Reference:	WELL @ 4785.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Fritzler 17-42-11	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	Wellbore #1	Database:	Landmark
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Offset Depths are relative to Offset Datum Coordinate System is US State Plane 1983, Colorado Northern Zone
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