

### Well Name: Hilfer 13-8D

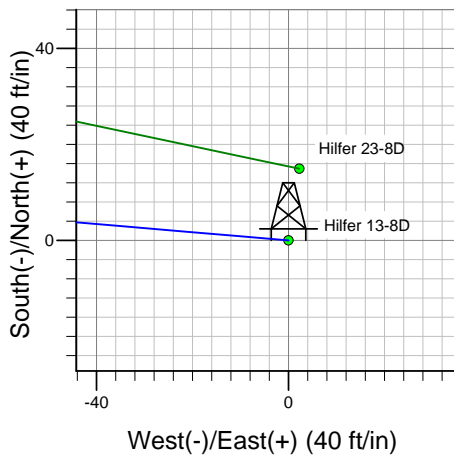
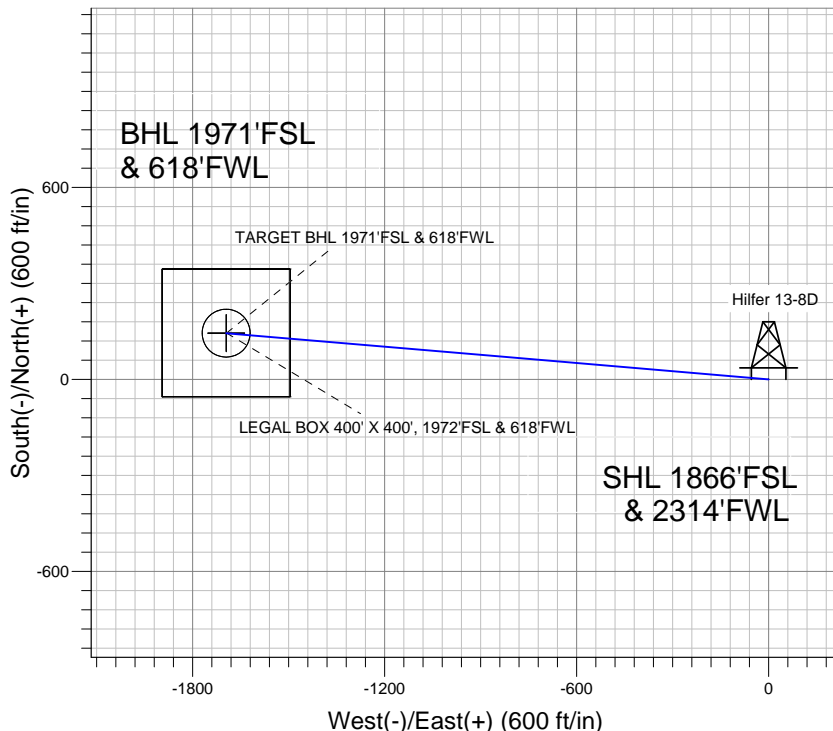
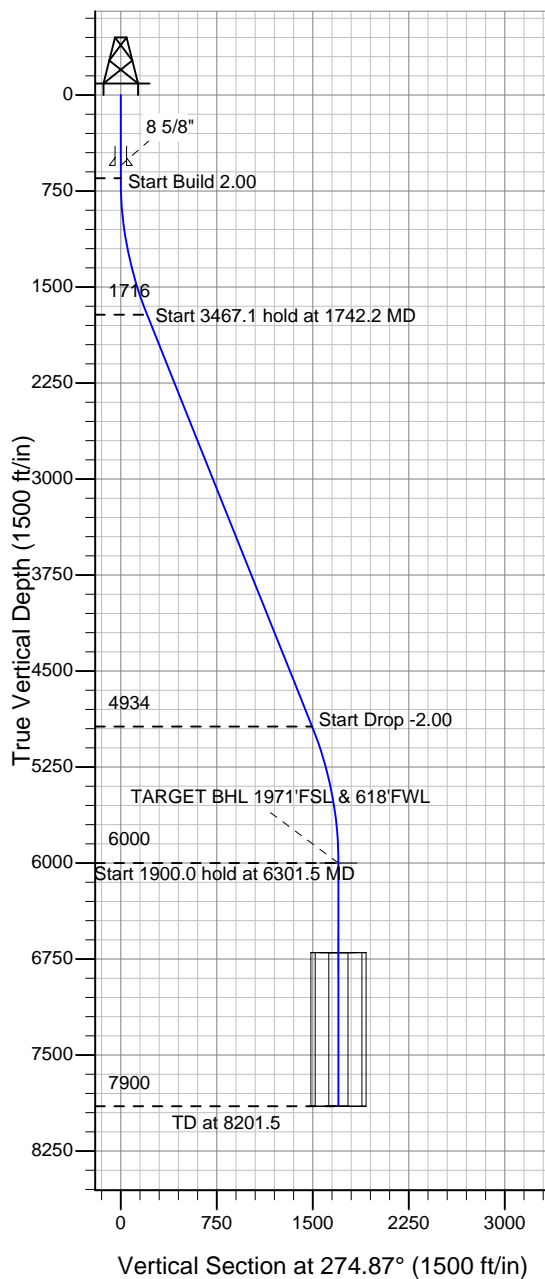
Surface Location: Hilfer 23-8D Pad Sec.8-T4N-R67W  
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone

Ground Elevation: 4829.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1361924.80	3162970.02	40.325410	-104.915490	

Original Well Elev WELL @ 4842.0ft (Original Well Elev)

### Synergy Resources



Hilfer 23-8D Pad Sec.8-T4N-R67W  
Hilfer 13-8D  
Plan #1 (12-27-11)  
14:49, December 28 2011



Azimuths to True North  
Magnetic North: 8.87°  
Magnetic Field  
Strength: 53019.6snT  
Dip Angle: 66.95°  
Date: 12/27/2011  
Model: IGRF2010

#### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 1971'FSL & 618'FWL	6000.0	144.3	-1695.3	40.325806	-104.921570	Point
LEGAL BOX 400' X 400', 1972'FSL & 618'FWL	6700.0	145.3	-1695.3	40.325809	-104.921570	Rectangle (Sides: L400.0 W400.0)
TARGET CIRCLE 1971'FSL & 618'FWL	6700.0	144.3	-1695.3	40.325806	-104.921570	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	650.0	0.00	0.00	650.0	0.0	0.0	0.00	0.00	0.0	
3	1742.2	21.84	274.87	1715.9	17.4	-204.9	2.00	274.87	205.7	
4	5209.3	21.84	274.87	4934.1	126.9	-1490.3	0.00	0.00	1495.7	
5	6301.5	0.00	0.00	6000.0	144.3	-1695.3	2.00	180.00	1701.4	TARGET BHL 1971'FSL & 618'FWL
6	8201.5	0.00	0.00	7900.0	144.3	-1695.3	0.00	0.00	1701.4	



## **Synergy Resources**

**SEC.8-T4N-R67W**

**Hilfer 23-8D Pad Sec.8-T4N-R67W**

**Hilfer 13-8D**

**Wellbore #1**

**Plan: Plan #1 (12-27-11)**

## **Standard Planning Report**

**28 December, 2011**

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	
650.0	0.00	0.00	650.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,742.2	21.84	274.87	1,715.9	17.4	-204.9	2.00	2.00	0.00	274.87	
5,209.3	21.84	274.87	4,934.1	126.9	-1,490.3	0.00	0.00	0.00	0.00	
6,301.5	0.00	0.00	6,000.0	144.3	-1,695.3	2.00	-2.00	0.00	180.00	TARGET BHL 1971
8,201.5	0.00	0.00	7,900.0	144.3	-1,695.3	0.00	0.00	0.00	0.00	

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Hilfer 13-8D
<b>Company:</b>	Synergy Resources	<b>TVD Reference:</b>	WELL @ 4842.0ft (Original Well Elev)
<b>Project:</b>	SEC.8-T4N-R67W	<b>MD Reference:</b>	WELL @ 4842.0ft (Original Well Elev)
<b>Site:</b>	Hilfer 23-8D Pad Sec.8-T4N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Hilfer 13-8D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (12-27-11)		

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
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	0.00
280.0	0.00	0.00	280.0	0.0	0.0	0.0	0.00	0.00	0.00
320.0	0.00	0.00	320.0	0.0	0.0	0.0	0.00	0.00	0.00
360.0	0.00	0.00	360.0	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
440.0	0.00	0.00	440.0	0.0	0.0	0.0	0.00	0.00	0.00
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	0.00
520.0	0.00	0.00	520.0	0.0	0.0	0.0	0.00	0.00	0.00
550.0	0.00	0.00	550.0	0.0	0.0	0.0	0.00	0.00	0.00
8 5/8"									
560.0	0.00	0.00	560.0	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
640.0	0.00	0.00	640.0	0.0	0.0	0.0	0.00	0.00	0.00
650.0	0.00	0.00	650.0	0.0	0.0	0.0	0.00	0.00	0.00
680.0	0.60	274.87	680.0	0.0	-0.2	0.2	2.00	2.00	0.00
720.0	1.40	274.87	720.0	0.1	-0.9	0.9	2.00	2.00	0.00
760.0	2.20	274.87	760.0	0.2	-2.1	2.1	2.00	2.00	0.00
800.0	3.00	274.87	799.9	0.3	-3.9	3.9	2.00	2.00	0.00
840.0	3.80	274.87	839.9	0.5	-6.3	6.3	2.00	2.00	0.00
880.0	4.60	274.87	879.8	0.8	-9.2	9.2	2.00	2.00	0.00
920.0	5.40	274.87	919.6	1.1	-12.7	12.7	2.00	2.00	0.00
960.0	6.20	274.87	959.4	1.4	-16.7	16.8	2.00	2.00	0.00
1,000.0	7.00	274.87	999.1	1.8	-21.3	21.4	2.00	2.00	0.00
1,040.0	7.80	274.87	1,038.8	2.2	-26.4	26.5	2.00	2.00	0.00
1,080.0	8.60	274.87	1,078.4	2.7	-32.1	32.2	2.00	2.00	0.00
1,120.0	9.40	274.87	1,117.9	3.3	-38.3	38.5	2.00	2.00	0.00
1,160.0	10.20	274.87	1,157.3	3.8	-45.1	45.3	2.00	2.00	0.00
1,200.0	11.00	274.87	1,196.6	4.5	-52.4	52.6	2.00	2.00	0.00
1,240.0	11.80	274.87	1,235.8	5.1	-60.3	60.5	2.00	2.00	0.00
1,280.0	12.60	274.87	1,274.9	5.9	-68.7	69.0	2.00	2.00	0.00
1,320.0	13.40	274.87	1,313.9	6.6	-77.7	78.0	2.00	2.00	0.00
1,360.0	14.20	274.87	1,352.8	7.4	-87.2	87.5	2.00	2.00	0.00
1,400.0	15.00	274.87	1,391.5	8.3	-97.3	97.6	2.00	2.00	0.00
1,440.0	15.80	274.87	1,430.0	9.2	-107.8	108.2	2.00	2.00	0.00
1,480.0	16.60	274.87	1,468.4	10.1	-119.0	119.4	2.00	2.00	0.00
1,520.0	17.40	274.87	1,506.7	11.1	-130.6	131.1	2.00	2.00	0.00
1,560.0	18.20	274.87	1,544.8	12.2	-142.8	143.3	2.00	2.00	0.00
1,600.0	19.00	274.87	1,582.7	13.2	-155.5	156.1	2.00	2.00	0.00
1,640.0	19.80	274.87	1,620.4	14.4	-168.8	169.4	2.00	2.00	0.00
1,680.0	20.60	274.87	1,658.0	15.5	-182.5	183.2	2.00	2.00	0.00
1,720.0	21.40	274.87	1,695.3	16.8	-196.8	197.5	2.00	2.00	0.00
1,742.2	21.84	274.87	1,715.9	17.4	-204.9	205.7	2.00	2.00	0.00
1,760.0	21.84	274.87	1,732.5	18.0	-211.5	212.3	0.00	0.00	0.00
1,800.0	21.84	274.87	1,769.6	19.3	-226.4	227.2	0.00	0.00	0.00
1,840.0	21.84	274.87	1,806.7	20.5	-241.2	242.1	0.00	0.00	0.00
1,880.0	21.84	274.87	1,843.8	21.8	-256.0	257.0	0.00	0.00	0.00
1,920.0	21.84	274.87	1,881.0	23.1	-270.9	271.8	0.00	0.00	0.00
1,960.0	21.84	274.87	1,918.1	24.3	-285.7	286.7	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Hilfer 13-8D
<b>Company:</b>	Synergy Resources	<b>TVD Reference:</b>	WELL @ 4842.0ft (Original Well Elev)
<b>Project:</b>	SEC.8-T4N-R67W	<b>MD Reference:</b>	WELL @ 4842.0ft (Original Well Elev)
<b>Site:</b>	Hilfer 23-8D Pad Sec.8-T4N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Hilfer 13-8D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (12-27-11)		

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)
2,000.0	21.84	274.87	1,955.2	25.6	-300.5	301.6	0.00	0.00	0.00
2,040.0	21.84	274.87	1,992.4	26.9	-315.4	316.5	0.00	0.00	0.00
2,080.0	21.84	274.87	2,029.5	28.1	-330.2	331.4	0.00	0.00	0.00
2,120.0	21.84	274.87	2,066.6	29.4	-345.0	346.3	0.00	0.00	0.00
2,160.0	21.84	274.87	2,103.7	30.6	-359.8	361.1	0.00	0.00	0.00
2,200.0	21.84	274.87	2,140.9	31.9	-374.7	376.0	0.00	0.00	0.00
2,240.0	21.84	274.87	2,178.0	33.2	-389.5	390.9	0.00	0.00	0.00
2,280.0	21.84	274.87	2,215.1	34.4	-404.3	405.8	0.00	0.00	0.00
2,320.0	21.84	274.87	2,252.2	35.7	-419.2	420.7	0.00	0.00	0.00
2,360.0	21.84	274.87	2,289.4	37.0	-434.0	435.6	0.00	0.00	0.00
2,400.0	21.84	274.87	2,326.5	38.2	-448.8	450.4	0.00	0.00	0.00
2,440.0	21.84	274.87	2,363.6	39.5	-463.6	465.3	0.00	0.00	0.00
2,480.0	21.84	274.87	2,400.8	40.7	-478.5	480.2	0.00	0.00	0.00
2,520.0	21.84	274.87	2,437.9	42.0	-493.3	495.1	0.00	0.00	0.00
2,560.0	21.84	274.87	2,475.0	43.3	-508.1	510.0	0.00	0.00	0.00
2,600.0	21.84	274.87	2,512.1	44.5	-523.0	524.9	0.00	0.00	0.00
2,640.0	21.84	274.87	2,549.3	45.8	-537.8	539.7	0.00	0.00	0.00
2,680.0	21.84	274.87	2,586.4	47.1	-552.6	554.6	0.00	0.00	0.00
2,720.0	21.84	274.87	2,623.5	48.3	-567.5	569.5	0.00	0.00	0.00
2,760.0	21.84	274.87	2,660.7	49.6	-582.3	584.4	0.00	0.00	0.00
2,800.0	21.84	274.87	2,697.8	50.8	-597.1	599.3	0.00	0.00	0.00
2,840.0	21.84	274.87	2,734.9	52.1	-611.9	614.2	0.00	0.00	0.00
2,880.0	21.84	274.87	2,772.0	53.4	-626.8	629.0	0.00	0.00	0.00
2,920.0	21.84	274.87	2,809.2	54.6	-641.6	643.9	0.00	0.00	0.00
2,960.0	21.84	274.87	2,846.3	55.9	-656.4	658.8	0.00	0.00	0.00
3,000.0	21.84	274.87	2,883.4	57.2	-671.3	673.7	0.00	0.00	0.00
3,040.0	21.84	274.87	2,920.6	58.4	-686.1	688.6	0.00	0.00	0.00
3,080.0	21.84	274.87	2,957.7	59.7	-700.9	703.5	0.00	0.00	0.00
3,120.0	21.84	274.87	2,994.8	60.9	-715.8	718.3	0.00	0.00	0.00
3,160.0	21.84	274.87	3,031.9	62.2	-730.6	733.2	0.00	0.00	0.00
3,200.0	21.84	274.87	3,069.1	63.5	-745.4	748.1	0.00	0.00	0.00
3,240.0	21.84	274.87	3,106.2	64.7	-760.2	763.0	0.00	0.00	0.00
3,280.0	21.84	274.87	3,143.3	66.0	-775.1	777.9	0.00	0.00	0.00
3,320.0	21.84	274.87	3,180.4	67.3	-789.9	792.8	0.00	0.00	0.00
3,360.0	21.84	274.87	3,217.6	68.5	-804.7	807.6	0.00	0.00	0.00
3,400.0	21.84	274.87	3,254.7	69.8	-819.6	822.5	0.00	0.00	0.00
3,440.0	21.84	274.87	3,291.8	71.0	-834.4	837.4	0.00	0.00	0.00
3,480.0	21.84	274.87	3,329.0	72.3	-849.2	852.3	0.00	0.00	0.00
3,520.0	21.84	274.87	3,366.1	73.6	-864.0	867.2	0.00	0.00	0.00
3,560.0	21.84	274.87	3,403.2	74.8	-878.9	882.1	0.00	0.00	0.00
3,600.0	21.84	274.87	3,440.3	76.1	-893.7	896.9	0.00	0.00	0.00
3,640.0	21.84	274.87	3,477.5	77.4	-908.5	911.8	0.00	0.00	0.00
3,680.0	21.84	274.87	3,514.6	78.6	-923.4	926.7	0.00	0.00	0.00
3,720.0	21.84	274.87	3,551.7	79.9	-938.2	941.6	0.00	0.00	0.00
3,760.0	21.84	274.87	3,588.9	81.1	-953.0	956.5	0.00	0.00	0.00
3,800.0	21.84	274.87	3,626.0	82.4	-967.9	971.4	0.00	0.00	0.00
3,840.0	21.84	274.87	3,663.1	83.7	-982.7	986.2	0.00	0.00	0.00
3,880.0	21.84	274.87	3,700.2	84.9	-997.5	1,001.1	0.00	0.00	0.00
3,920.0	21.84	274.87	3,737.4	86.2	-1,012.3	1,016.0	0.00	0.00	0.00
3,960.0	21.84	274.87	3,774.5	87.5	-1,027.2	1,030.9	0.00	0.00	0.00
4,000.0	21.84	274.87	3,811.6	88.7	-1,042.0	1,045.8	0.00	0.00	0.00
4,040.0	21.84	274.87	3,848.8	90.0	-1,056.8	1,060.7	0.00	0.00	0.00
4,080.0	21.84	274.87	3,885.9	91.2	-1,071.7	1,075.5	0.00	0.00	0.00
4,120.0	21.84	274.87	3,923.0	92.5	-1,086.5	1,090.4	0.00	0.00	0.00

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Hilfer 13-8D
<b>Company:</b>	Synergy Resources	<b>TVD Reference:</b>	WELL @ 4842.0ft (Original Well Elev)
<b>Project:</b>	SEC.8-T4N-R67W	<b>MD Reference:</b>	WELL @ 4842.0ft (Original Well Elev)
<b>Site:</b>	Hilfer 23-8D Pad Sec.8-T4N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Hilfer 13-8D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (12-27-11)		

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)	
4,160.0	21.84	274.87	3,960.1	93.8	-1,101.3	1,105.3	0.00	0.00	0.00	
4,200.0	21.84	274.87	3,997.3	95.0	-1,116.1	1,120.2	0.00	0.00	0.00	
4,240.0	21.84	274.87	4,034.4	96.3	-1,131.0	1,135.1	0.00	0.00	0.00	
4,280.0	21.84	274.87	4,071.5	97.6	-1,145.8	1,150.0	0.00	0.00	0.00	
4,320.0	21.84	274.87	4,108.6	98.8	-1,160.6	1,164.8	0.00	0.00	0.00	
4,360.0	21.84	274.87	4,145.8	100.1	-1,175.5	1,179.7	0.00	0.00	0.00	
4,400.0	21.84	274.87	4,182.9	101.3	-1,190.3	1,194.6	0.00	0.00	0.00	
4,440.0	21.84	274.87	4,220.0	102.6	-1,205.1	1,209.5	0.00	0.00	0.00	
4,480.0	21.84	274.87	4,257.2	103.9	-1,220.0	1,224.4	0.00	0.00	0.00	
4,520.0	21.84	274.87	4,294.3	105.1	-1,234.8	1,239.3	0.00	0.00	0.00	
4,560.0	21.84	274.87	4,331.4	106.4	-1,249.6	1,254.1	0.00	0.00	0.00	
4,600.0	21.84	274.87	4,368.5	107.7	-1,264.4	1,269.0	0.00	0.00	0.00	
4,640.0	21.84	274.87	4,405.7	108.9	-1,279.3	1,283.9	0.00	0.00	0.00	
4,680.0	21.84	274.87	4,442.8	110.2	-1,294.1	1,298.8	0.00	0.00	0.00	
4,720.0	21.84	274.87	4,479.9	111.4	-1,308.9	1,313.7	0.00	0.00	0.00	
4,760.0	21.84	274.87	4,517.1	112.7	-1,323.8	1,328.6	0.00	0.00	0.00	
4,800.0	21.84	274.87	4,554.2	114.0	-1,338.6	1,343.4	0.00	0.00	0.00	
4,840.0	21.84	274.87	4,591.3	115.2	-1,353.4	1,358.3	0.00	0.00	0.00	
4,880.0	21.84	274.87	4,628.4	116.5	-1,368.3	1,373.2	0.00	0.00	0.00	
4,920.0	21.84	274.87	4,665.6	117.8	-1,383.1	1,388.1	0.00	0.00	0.00	
4,960.0	21.84	274.87	4,702.7	119.0	-1,397.9	1,403.0	0.00	0.00	0.00	
5,000.0	21.84	274.87	4,739.8	120.3	-1,412.7	1,417.9	0.00	0.00	0.00	
5,040.0	21.84	274.87	4,777.0	121.5	-1,427.6	1,432.7	0.00	0.00	0.00	
5,080.0	21.84	274.87	4,814.1	122.8	-1,442.4	1,447.6	0.00	0.00	0.00	
5,120.0	21.84	274.87	4,851.2	124.1	-1,457.2	1,462.5	0.00	0.00	0.00	
5,160.0	21.84	274.87	4,888.3	125.3	-1,472.1	1,477.4	0.00	0.00	0.00	
5,200.0	21.84	274.87	4,925.5	126.6	-1,486.9	1,492.3	0.00	0.00	0.00	
5,209.3	21.84	274.87	4,934.1	126.9	-1,490.3	1,495.7	0.00	0.00	0.00	
5,240.0	21.23	274.87	4,962.7	127.8	-1,501.6	1,507.0	2.00	-2.00	0.00	
5,280.0	20.43	274.87	5,000.0	129.1	-1,515.7	1,521.2	2.00	-2.00	0.00	
5,320.0	19.63	274.87	5,037.6	130.2	-1,529.4	1,534.9	2.00	-2.00	0.00	
5,360.0	18.83	274.87	5,075.4	131.3	-1,542.5	1,548.1	2.00	-2.00	0.00	
5,400.0	18.03	274.87	5,113.3	132.4	-1,555.1	1,560.7	2.00	-2.00	0.00	
5,440.0	17.23	274.87	5,151.5	133.4	-1,567.2	1,572.9	2.00	-2.00	0.00	
5,480.0	16.43	274.87	5,189.7	134.4	-1,578.7	1,584.4	2.00	-2.00	0.00	
5,520.0	15.63	274.87	5,228.2	135.4	-1,589.7	1,595.5	2.00	-2.00	0.00	
5,560.0	14.83	274.87	5,266.8	136.2	-1,600.2	1,606.0	2.00	-2.00	0.00	
5,600.0	14.03	274.87	5,305.5	137.1	-1,610.1	1,616.0	2.00	-2.00	0.00	
5,640.0	13.23	274.87	5,344.4	137.9	-1,619.5	1,625.4	2.00	-2.00	0.00	
5,680.0	12.43	274.87	5,383.4	138.6	-1,628.4	1,634.3	2.00	-2.00	0.00	
5,720.0	11.63	274.87	5,422.5	139.4	-1,636.7	1,642.6	2.00	-2.00	0.00	
5,760.0	10.83	274.87	5,461.8	140.0	-1,644.4	1,650.4	2.00	-2.00	0.00	
5,800.0	10.03	274.87	5,501.1	140.6	-1,651.7	1,657.6	2.00	-2.00	0.00	
5,840.0	9.23	274.87	5,540.5	141.2	-1,658.3	1,664.3	2.00	-2.00	0.00	
5,880.0	8.43	274.87	5,580.1	141.7	-1,664.4	1,670.5	2.00	-2.00	0.00	
5,920.0	7.63	274.87	5,619.7	142.2	-1,670.0	1,676.0	2.00	-2.00	0.00	
5,960.0	6.83	274.87	5,659.3	142.6	-1,675.0	1,681.1	2.00	-2.00	0.00	
6,000.0	6.03	274.87	5,699.1	143.0	-1,679.5	1,685.6	2.00	-2.00	0.00	
6,040.0	5.23	274.87	5,738.9	143.3	-1,683.4	1,689.5	2.00	-2.00	0.00	
6,080.0	4.43	274.87	5,778.8	143.6	-1,686.7	1,692.8	2.00	-2.00	0.00	
6,120.0	3.63	274.87	5,818.7	143.9	-1,689.5	1,695.7	2.00	-2.00	0.00	
6,160.0	2.83	274.87	5,858.6	144.0	-1,691.8	1,697.9	2.00	-2.00	0.00	
6,200.0	2.03	274.87	5,898.6	144.2	-1,693.5	1,699.6	2.00	-2.00	0.00	
6,240.0	1.23	274.87	5,938.5	144.3	-1,694.6	1,700.7	2.00	-2.00	0.00	

<b>Database:</b>	Landmark	<b>Local Co-ordinate Reference:</b>	Well Hilfer 13-8D
<b>Company:</b>	Synergy Resources	<b>TVD Reference:</b>	WELL @ 4842.0ft (Original Well Elev)
<b>Project:</b>	SEC.8-T4N-R67W	<b>MD Reference:</b>	WELL @ 4842.0ft (Original Well Elev)
<b>Site:</b>	Hilfer 23-8D Pad Sec.8-T4N-R67W	<b>North Reference:</b>	True
<b>Well:</b>	Hilfer 13-8D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Wellbore #1		
<b>Design:</b>	Plan #1 (12-27-11)		

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)
6,280.0	0.43	274.87	5,978.5	144.3	-1,695.2	1,701.3	2.00	-2.00	0.00
6,301.5	0.00	0.00	6,000.0	144.3	-1,695.3	1,701.4	2.00	-2.00	396.59
<b>TARGET BHL 1971'FSL &amp; 618'FWL</b>									
6,320.0	0.00	0.00	6,018.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
6,360.0	0.00	0.00	6,058.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
6,400.0	0.00	0.00	6,098.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
6,440.0	0.00	0.00	6,138.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
6,480.0	0.00	0.00	6,178.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
6,520.0	0.00	0.00	6,218.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
6,560.0	0.00	0.00	6,258.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
6,600.0	0.00	0.00	6,298.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
6,640.0	0.00	0.00	6,338.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
6,680.0	0.00	0.00	6,378.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
6,720.0	0.00	0.00	6,418.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
6,760.0	0.00	0.00	6,458.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
6,800.0	0.00	0.00	6,498.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
6,840.0	0.00	0.00	6,538.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
6,880.0	0.00	0.00	6,578.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
6,920.0	0.00	0.00	6,618.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
6,960.0	0.00	0.00	6,658.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
7,000.0	0.00	0.00	6,698.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
7,001.5	0.00	0.00	6,700.0	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
<b>LEGAL BOX 400' X 400', 1972'FSL &amp; 618'FWL - TARGET CIRCLE 1971'FSL &amp; 618'FWL</b>									
7,040.0	0.00	0.00	6,738.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
7,080.0	0.00	0.00	6,778.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
7,120.0	0.00	0.00	6,818.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
7,160.0	0.00	0.00	6,858.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
7,200.0	0.00	0.00	6,898.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
7,240.0	0.00	0.00	6,938.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
7,280.0	0.00	0.00	6,978.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
7,320.0	0.00	0.00	7,018.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
7,360.0	0.00	0.00	7,058.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
7,400.0	0.00	0.00	7,098.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
7,440.0	0.00	0.00	7,138.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
7,480.0	0.00	0.00	7,178.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
7,520.0	0.00	0.00	7,218.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
7,560.0	0.00	0.00	7,258.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
7,600.0	0.00	0.00	7,298.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
7,640.0	0.00	0.00	7,338.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
7,680.0	0.00	0.00	7,378.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
7,720.0	0.00	0.00	7,418.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
7,760.0	0.00	0.00	7,458.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
7,800.0	0.00	0.00	7,498.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
7,840.0	0.00	0.00	7,538.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
7,880.0	0.00	0.00	7,578.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
7,920.0	0.00	0.00	7,618.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
7,960.0	0.00	0.00	7,658.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
8,000.0	0.00	0.00	7,698.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
8,040.0	0.00	0.00	7,738.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
8,080.0	0.00	0.00	7,778.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
8,120.0	0.00	0.00	7,818.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
8,160.0	0.00	0.00	7,858.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
8,200.0	0.00	0.00	7,898.5	144.3	-1,695.3	1,701.4	0.00	0.00	0.00
8,201.5	0.00	0.00	7,900.0	144.3	-1,695.3	1,701.4	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)

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)		Name	Casing Diameter (")	Hole Diameter (")
550.0	550.0	8 5/8"		8-5/8	12-1/4





# **Synergy Resources**

**SEC.8-T4N-R67W**

**Hilfer 23-8D Pad Sec.8-T4N-R67W**

**Hilfer 13-8D**

**Wellbore #1**

**Plan #1 (12-27-11)**

## **Anticollision Report**

**28 December, 2011**



<b>Company:</b>	Synergy Resources	<b>Local Co-ordinate Reference:</b>	Well Hilfer 13-8D
<b>Project:</b>	SEC.8-T4N-R67W	<b>TVD Reference:</b>	WELL @ 4842.0ft (Original Well Elev)
<b>Reference Site:</b>	Hilfer 23-8D Pad Sec.8-T4N-R67W	<b>MD Reference:</b>	WELL @ 4842.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Hilfer 13-8D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (12-27-11)	<b>Offset TVD Reference:</b>	Offset Datum

Offset Design Hilfer 23-8D Pad Sec.8-T4N-R67W - Hilfer 23-8D - Wellbore #1 - Plan #1 (12-27-11)												Offset Site Error:	0.0ft
Survey Program: 0-MWD												Offset Well Error:	0.0ft
Reference		Offset		Semi Major Axis			Distance						Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
2,200.0	2,140.9	2,203.0	2,196.9	8.9	5.0	175.15	31.8	-77.6	302.3	292.5	9.78	30.905	
2,300.0	2,233.7	2,301.2	2,293.2	9.7	5.3	175.02	35.6	-95.8	321.5	311.2	10.33	31.125	
2,400.0	2,326.5	2,399.3	2,389.6	10.5	5.7	174.91	39.5	-113.9	340.8	329.9	10.89	31.301	
2,500.0	2,419.3	2,497.4	2,486.0	11.3	6.0	174.81	43.3	-132.1	360.0	348.6	11.45	31.444	
2,600.0	2,512.1	2,595.6	2,582.3	12.0	6.4	174.73	47.1	-150.3	379.2	367.2	12.02	31.560	
2,700.0	2,605.0	2,693.7	2,678.7	12.8	6.7	174.64	51.0	-168.5	398.5	385.9	12.59	31.654	
2,800.0	2,697.8	2,791.8	2,775.0	13.6	7.1	174.57	54.8	-186.6	417.7	404.5	13.16	31.731	
2,900.0	2,790.6	2,889.9	2,871.4	14.4	7.5	174.51	58.6	-204.8	436.9	423.2	13.74	31.794	
3,000.0	2,883.4	2,988.1	2,967.8	15.2	7.9	174.44	62.5	-223.0	456.2	441.9	14.33	31.844	
3,100.0	2,976.2	3,086.2	3,064.1	16.0	8.2	174.39	66.3	-241.1	475.4	460.5	14.91	31.885	
3,200.0	3,069.1	3,184.3	3,160.5	16.8	8.6	174.34	70.2	-259.3	494.7	479.2	15.50	31.918	
3,300.0	3,161.9	3,282.5	3,256.8	17.6	9.0	174.29	74.0	-277.5	513.9	497.8	16.09	31.945	
3,400.0	3,254.7	3,380.6	3,353.2	18.4	9.4	174.25	77.8	-295.7	533.1	516.5	16.68	31.965	
3,500.0	3,347.5	3,478.7	3,449.5	19.2	9.8	174.20	81.7	-313.8	552.4	535.1	17.27	31.981	
3,600.0	3,440.3	3,576.9	3,545.9	20.0	10.2	174.17	85.5	-332.0	571.6	553.7	17.87	31.993	
3,700.0	3,533.2	3,675.0	3,642.3	20.8	10.6	174.13	89.3	-350.2	590.8	572.4	18.46	32.002	
3,800.0	3,626.0	3,773.1	3,738.6	21.6	11.0	174.10	93.2	-368.3	610.1	591.0	19.06	32.008	
3,900.0	3,718.8	3,871.3	3,835.0	22.4	11.4	174.06	97.0	-386.5	629.3	609.7	19.66	32.012	
4,000.0	3,811.6	3,969.4	3,931.3	23.2	11.8	174.03	100.8	-404.7	648.6	628.3	20.26	32.014	
4,100.0	3,904.4	4,054.3	4,014.8	24.0	12.1	174.02	104.0	-419.9	668.5	647.7	20.80	32.135	
4,200.0	3,997.3	4,133.5	4,093.0	24.8	12.3	174.05	106.6	-431.9	691.0	669.7	21.32	32.412	
4,300.0	4,090.1	4,211.6	4,170.5	25.6	12.5	174.12	108.7	-441.7	716.1	694.3	21.83	32.810	
4,400.0	4,182.9	4,288.5	4,247.0	26.4	12.7	174.22	110.3	-449.4	743.7	721.4	22.32	33.321	
4,500.0	4,275.7	4,364.3	4,322.5	27.2	12.8	174.34	111.5	-455.0	773.9	751.1	22.80	33.936	
4,600.0	4,368.5	4,438.7	4,396.9	28.0	13.0	174.49	112.2	-458.5	806.4	783.1	23.28	34.644	
4,700.0	4,461.4	4,511.8	4,470.0	28.8	13.1	174.65	112.6	-460.2	841.4	817.6	23.74	35.436	
4,800.0	4,554.2	4,596.0	4,554.2	29.6	13.2	174.86	112.6	-460.3	878.2	854.0	24.23	36.253	
4,900.0	4,647.0	4,688.8	4,647.0	30.4	13.4	175.06	112.6	-460.3	915.3	890.6	24.73	37.010	
5,000.0	4,739.8	4,781.7	4,739.8	31.2	13.5	175.26	112.6	-460.3	952.4	927.2	25.24	37.734	
5,100.0	4,832.6	4,874.5	4,832.6	32.0	13.7	175.44	112.6	-460.3	989.5	963.8	25.75	38.426	
5,209.3	4,934.1	4,975.9	4,934.1	32.8	13.9	175.62	112.6	-460.3	1,030.1	1,003.8	26.31	39.148	
5,300.0	5,018.8	5,060.6	5,018.8	33.5	14.0	175.80	112.6	-460.3	1,062.4	1,035.6	26.85	39.574	
5,400.0	5,113.3	5,155.2	5,113.3	34.0	14.2	175.97	112.6	-460.3	1,094.9	1,067.6	27.39	39.981	
5,500.0	5,208.9	5,250.8	5,208.9	34.5	14.3	176.12	112.6	-460.3	1,124.2	1,096.3	27.89	40.307	
5,600.0	5,305.5	5,347.4	5,305.5	35.0	14.5	176.24	112.6	-460.3	1,150.0	1,121.7	28.36	40.558	
5,700.0	5,402.9	5,444.8	5,402.9	35.4	14.7	176.34	112.6	-460.3	1,172.5	1,143.8	28.78	40.740	
5,800.0	5,501.1	5,542.9	5,501.1	35.7	14.8	176.43	112.6	-460.3	1,191.6	1,162.5	29.17	40.858	
5,900.0	5,599.8	5,641.7	5,599.8	36.0	15.0	176.49	112.6	-460.3	1,207.3	1,177.8	29.51	40.914	
6,000.0	5,699.1	5,740.9	5,699.1	36.2	15.2	176.54	112.6	-460.3	1,219.5	1,189.7	29.81	40.913	
6,100.0	5,798.7	5,840.5	5,798.7	36.4	15.4	176.58	112.6	-460.3	1,228.3	1,198.2	30.06	40.857	
6,200.0	5,898.6	5,940.4	5,898.6	36.5	15.6	176.60	112.6	-460.3	1,233.5	1,203.3	30.27	40.746	
6,301.5	6,000.0	6,041.8	6,000.0	36.6	15.7	91.47	112.6	-460.3	1,235.3	1,204.9	30.45	40.574	
6,400.0	6,098.5	6,140.4	6,098.5	36.7	15.9	91.47	112.6	-460.3	1,235.3	1,204.5	30.80	40.110	
6,500.0	6,198.5	6,240.4	6,198.5	36.8	16.1	91.47	112.6	-460.3	1,235.3	1,204.2	31.16	39.643	
6,600.0	6,298.5	6,340.4	6,298.5	36.8	16.3	91.47	112.6	-460.3	1,235.3	1,203.8	31.53	39.185	
6,700.0	6,398.5	6,440.4	6,398.5	36.9	16.5	91.47	112.6	-460.3	1,235.3	1,203.4	31.89	38.735	
6,800.0	6,498.5	6,540.4	6,498.5	37.0	16.7	91.47	112.6	-460.3	1,235.3	1,203.1	32.26	38.292	
6,900.0	6,598.5	6,640.4	6,598.5	37.1	16.9	91.47	112.6	-460.3	1,235.3	1,202.7	32.63	37.858	
7,000.0	6,698.5	6,740.4	6,698.5	37.2	17.0	91.47	112.6	-460.3	1,235.3	1,202.3	33.00	37.431	
7,100.0	6,798.5	6,840.4	6,798.5	37.3	17.2	91.47	112.6	-460.3	1,235.3	1,202.0	33.38	37.012	
7,200.0	6,898.5	6,940.4	6,898.5	37.3	17.4	91.47	112.6	-460.3	1,235.3	1,201.6	33.75	36.601	
7,300.0	6,998.5	7,040.4	6,998.5	37.4	17.6	91.47	112.6	-460.3	1,235.3	1,201.2	34.13	36.197	

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

<b>Company:</b>	Synergy Resources	<b>Local Co-ordinate Reference:</b>	Well Hilfer 13-8D
<b>Project:</b>	SEC.8-T4N-R67W	<b>TVD Reference:</b>	WELL @ 4842.0ft (Original Well Elev)
<b>Reference Site:</b>	Hilfer 23-8D Pad Sec.8-T4N-R67W	<b>MD Reference:</b>	WELL @ 4842.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Hilfer 13-8D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (12-27-11)	<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	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)				
7,400.0	7,098.5	7,140.4	7,098.5	37.5	17.8	91.47	112.6	-460.3	1,235.3	1,200.8	34.51	35.800			
7,500.0	7,198.5	7,240.4	7,198.5	37.6	18.0	91.47	112.6	-460.3	1,235.3	1,200.4	34.89	35.410			
7,600.0	7,298.5	7,340.4	7,298.5	37.7	18.2	91.47	112.6	-460.3	1,235.3	1,200.1	35.27	35.027			
7,700.0	7,398.5	7,440.4	7,398.5	37.8	18.4	91.47	112.6	-460.3	1,235.3	1,199.7	35.65	34.651			
7,800.0	7,498.5	7,540.4	7,498.5	37.9	18.6	91.47	112.6	-460.3	1,235.3	1,199.3	36.04	34.281			
7,900.0	7,598.5	7,640.4	7,598.5	38.0	18.8	91.47	112.6	-460.3	1,235.3	1,198.9	36.42	33.918			
8,000.0	7,698.5	7,740.4	7,698.5	38.1	19.0	91.47	112.6	-460.3	1,235.3	1,198.5	36.81	33.562			
8,100.0	7,798.5	7,840.4	7,798.5	38.2	19.2	91.47	112.6	-460.3	1,235.3	1,198.1	37.20	33.212			
8,201.5	7,900.0	7,941.8	7,900.0	38.3	19.4	91.47	112.6	-460.3	1,235.3	1,197.7	37.59	32.862			

<b>Company:</b>	Synergy Resources	<b>Local Co-ordinate Reference:</b>	Well Hilfer 13-8D
<b>Project:</b>	SEC.8-T4N-R67W	<b>TVD Reference:</b>	WELL @ 4842.0ft (Original Well Elev)
<b>Reference Site:</b>	Hilfer 23-8D Pad Sec.8-T4N-R67W	<b>MD Reference:</b>	WELL @ 4842.0ft (Original Well Elev)
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	Hilfer 13-8D	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Well Error:</b>	0.0ft	<b>Output errors are at</b>	2.00 sigma
<b>Reference Wellbore</b>	Wellbore #1	<b>Database:</b>	Landmark
<b>Reference Design:</b>	Plan #1 (12-27-11)	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to WELL @ 4842.0ft (Original Well Elev) Coordinates are relative to: Hilfer 13-8D  
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: 0.38°



**Company:** Synergy Resources  
**Project:** SEC.8-T4N-R67W  
**Reference Site:** Hilfer 23-8D Pad Sec.8-T4N-R67W  
**Site Error:** 0.0ft  
**Reference Well:** Hilfer 13-8D  
**Well Error:** 0.0ft  
**Reference Wellbore:** Wellbore #1  
**Reference Design:** Plan #1 (12-27-11)

**Local Co-ordinate Reference:** Well Hilfer 13-8D  
**TVD Reference:** WELL @ 4842.0ft (Original Well Elev)  
**MD Reference:** WELL @ 4842.0ft (Original Well Elev)  
**North Reference:** True  
**Survey Calculation Method:** Minimum Curvature  
**Output errors are at** 2.00 sigma  
**Database:** Landmark  
**Offset TVD Reference:** Offset Datum

Reference Depths are relative to WELL @ 4842.0ft (Original Well Elev) Coordinates are relative to: Hilfer 13-8D  
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: 0.38°

