

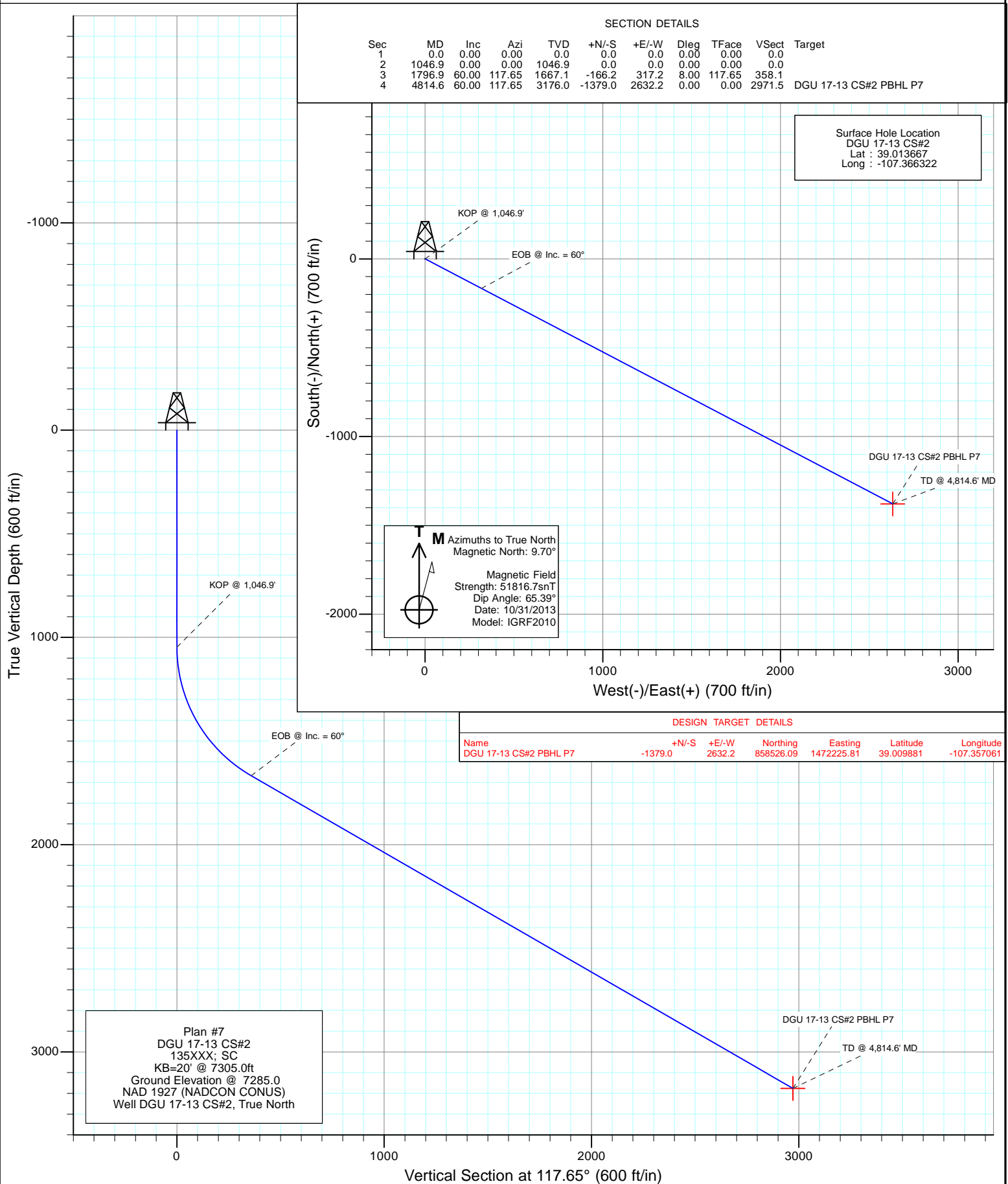


**GUNNISON ENERGY CORPORATION**

Project: Gunnison County, CO  
Site: Deadman Gulch Unit  
Well: DGU 17-13 CS#2  
Wellbore: OH  
Design: Plan #7



**CATHEDRAL**



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well DGU 17-13 CS#2
<b>Company:</b>	Gunnison Energy Corporation	<b>TVD Reference:</b>	KB=20' @ 7305.0ft
<b>Project:</b>	Gunnison County, CO	<b>MD Reference:</b>	KB=20' @ 7305.0ft
<b>Site:</b>	Deadman Gulch Unit	<b>North Reference:</b>	True
<b>Well:</b>	DGU 17-13 CS#2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #7		

<b>Project</b>	Gunnison County, CO		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Colorado South 503		

Site		Deadman Gulch Unit			
Site Position:		Northing:	861,395.66 ft	Latitude:	39.017439
From:	Lat/Long	Easting:	1,466,432.79 ft	Longitude:	-107.377642
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.15 °

Well	DGU 17-13 CS#2					
Well Position	+N/-S	0.0 ft	Northing:	859,957.41 ft	Latitude:	39.013667
	+E/-W	0.0 ft	Easting:	1,469,621.72 ft	Longitude:	-107.366322
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	7,285.0 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>	<b>Dip Angle</b>	<b>Field Strength</b>
			(°)	(°)	(nT)
	IGRF2010	10/31/2013	9.70	65.39	51,817

<b>Design</b>	Plan #7			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>
	(ft)	(ft)	(ft)	(°)
	0.0	0.0	0.0	117.65

<b>Plan Sections</b>										
<b>Measured Depth</b>	<b>Inclination</b>	<b>Azimuth</b>	<b>Vertical Depth</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Dogleg Rate</b>	<b>Build Rate</b>	<b>Turn Rate</b>	<b>TFO</b>	<b>Target</b>
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,046.9	0.00	0.00	1,046.9	0.0	0.0	0.00	0.00	0.00	0.00	
1,796.9	60.00	117.65	1,667.1	-166.2	317.2	8.00	8.00	0.00	117.65	
4,814.6	60.00	117.65	3,176.0	-1,379.0	2,632.2	0.00	0.00	0.00	0.00	DGU 17-13 CS#2 PBI

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well DGU 17-13 CS#2
<b>Company:</b>	Gunnison Energy Corporation	<b>TVD Reference:</b>	KB=20' @ 7305.0ft
<b>Project:</b>	Gunnison County, CO	<b>MD Reference:</b>	KB=20' @ 7305.0ft
<b>Site:</b>	Deadman Gulch Unit	<b>North Reference:</b>	True
<b>Well:</b>	DGU 17-13 CS#2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #7		

### 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)	Comments / Formations
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	
1,046.9	0.00	0.00	1,046.9	0.0	0.0	0.0	0.00	0.00	KOP @ 1,046.9'
1,050.0	0.25	117.65	1,050.0	0.0	0.0	0.0	8.00	8.00	
1,100.0	4.25	117.65	1,100.0	-0.9	1.7	2.0	8.00	8.00	
1,150.0	8.25	117.65	1,149.6	-3.4	6.6	7.4	8.00	8.00	
1,200.0	12.25	117.65	1,198.8	-7.6	14.4	16.3	8.00	8.00	
1,250.0	16.25	117.65	1,247.3	-13.3	25.3	28.6	8.00	8.00	
1,300.0	20.25	117.65	1,294.8	-20.5	39.2	44.3	8.00	8.00	
1,350.0	24.25	117.65	1,341.0	-29.3	56.0	63.2	8.00	8.00	
1,400.0	28.25	117.65	1,385.9	-39.6	75.6	85.3	8.00	8.00	
1,450.0	32.25	117.65	1,429.1	-51.3	97.9	110.5	8.00	8.00	
1,500.0	36.25	117.65	1,470.4	-64.3	122.8	138.6	8.00	8.00	
1,550.0	40.25	117.65	1,509.6	-78.7	150.2	169.6	8.00	8.00	
1,600.0	44.25	117.65	1,546.6	-94.3	180.0	203.2	8.00	8.00	
1,650.0	48.25	117.65	1,581.2	-111.0	212.0	239.3	8.00	8.00	
1,700.0	52.25	117.65	1,613.2	-128.9	246.0	277.7	8.00	8.00	
1,750.0	56.25	117.65	1,642.4	-147.7	281.9	318.3	8.00	8.00	
1,796.9	60.00	117.65	1,667.1	-166.2	317.2	358.1	8.00	8.00	EOB @ Inc. = 60°
1,800.0	60.00	117.65	1,668.7	-167.4	319.6	360.8	0.00	0.00	
1,900.0	60.00	117.65	1,718.7	-207.6	396.3	447.4	0.00	0.00	
2,000.0	60.00	117.65	1,768.7	-247.8	473.0	534.0	0.00	0.00	
2,100.0	60.00	117.65	1,818.7	-288.0	549.7	620.6	0.00	0.00	
2,200.0	60.00	117.65	1,868.7	-328.2	626.4	707.2	0.00	0.00	
2,300.0	60.00	117.65	1,918.7	-368.4	703.1	793.8	0.00	0.00	
2,400.0	60.00	117.65	1,968.7	-408.6	779.9	880.4	0.00	0.00	
2,500.0	60.00	117.65	2,018.7	-448.8	856.6	967.0	0.00	0.00	
2,600.0	60.00	117.65	2,068.7	-489.0	933.3	1,053.6	0.00	0.00	
2,700.0	60.00	117.65	2,118.7	-529.1	1,010.0	1,140.2	0.00	0.00	
2,800.0	60.00	117.65	2,168.7	-569.3	1,086.7	1,226.8	0.00	0.00	
2,900.0	60.00	117.65	2,218.7	-609.5	1,163.4	1,313.4	0.00	0.00	
3,000.0	60.00	117.65	2,268.7	-649.7	1,240.1	1,400.0	0.00	0.00	
3,100.0	60.00	117.65	2,318.7	-689.9	1,316.8	1,486.6	0.00	0.00	
3,200.0	60.00	117.65	2,368.7	-730.1	1,393.6	1,573.2	0.00	0.00	
3,300.0	60.00	117.65	2,418.7	-770.3	1,470.3	1,659.8	0.00	0.00	
3,400.0	60.00	117.65	2,468.7	-810.5	1,547.0	1,746.4	0.00	0.00	
3,500.0	60.00	117.65	2,518.7	-850.7	1,623.7	1,833.0	0.00	0.00	
3,600.0	60.00	117.65	2,568.7	-890.9	1,700.4	1,919.6	0.00	0.00	
3,700.0	60.00	117.65	2,618.7	-931.0	1,777.1	2,006.2	0.00	0.00	
3,800.0	60.00	117.65	2,668.7	-971.2	1,853.8	2,092.8	0.00	0.00	
3,900.0	60.00	117.65	2,718.7	-1,011.4	1,930.5	2,179.4	0.00	0.00	
4,000.0	60.00	117.65	2,768.7	-1,051.6	2,007.2	2,266.0	0.00	0.00	
4,100.0	60.00	117.65	2,818.7	-1,091.8	2,084.0	2,352.6	0.00	0.00	

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well DGU 17-13 CS#2
<b>Company:</b>	Gunnison Energy Corporation	<b>TVD Reference:</b>	KB=20' @ 7305.0ft
<b>Project:</b>	Gunnison County, CO	<b>MD Reference:</b>	KB=20' @ 7305.0ft
<b>Site:</b>	Deadman Gulch Unit	<b>North Reference:</b>	True
<b>Well:</b>	DGU 17-13 CS#2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #7		

### 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)	Comments / Formations
4,200.0	60.00	117.65	2,868.7	-1,132.0	2,160.7	2,439.2	0.00	0.00	
4,300.0	60.00	117.65	2,918.7	-1,172.2	2,237.4	2,525.8	0.00	0.00	
4,400.0	60.00	117.65	2,968.7	-1,212.4	2,314.1	2,612.5	0.00	0.00	
4,500.0	60.00	117.65	3,018.7	-1,252.6	2,390.8	2,699.1	0.00	0.00	
4,600.0	60.00	117.65	3,068.7	-1,292.8	2,467.5	2,785.7	0.00	0.00	
4,700.0	60.00	117.65	3,118.7	-1,332.9	2,544.2	2,872.3	0.00	0.00	
4,800.0	60.00	117.65	3,168.7	-1,373.1	2,620.9	2,958.9	0.00	0.00	
4,814.6	60.00	117.65	3,176.0	-1,379.0	2,632.2	2,971.5	0.00	0.00	TD @ 4,814.6' MD

### Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
DGU 17-13 CS#2 PBHL - hit/miss target - Shape	0.00	358.86	3,183.0	-1,492.3	2,737.6	858,410.72	1,472,328.98	39.009570	-107.356690
- plan misses target center by 154.9ft at 4814.6ft MD (3176.0 TVD, -1379.0 N, 2632.2 E)									
- Point									
DMGU 17-13 CS#2 PBHL - hit/miss target - Shape	0.00	358.86	3,183.0	-1,378.6	2,632.2	858,526.46	1,472,225.81	39.009882	-107.357061
- plan misses target center by 7.0ft at 4814.6ft MD (3176.0 TVD, -1379.0 N, 2632.2 E)									
- Point									
DGU 17-13 CS#2 PBHL - hit/miss target - Shape	0.00	358.86	3,176.0	-1,379.0	2,632.2	858,526.09	1,472,225.81	39.009881	-107.357061
- plan hits target center									
- Point									
DGU 17-13 CS#2 PBHL - hit/miss target - Shape	0.00	358.86	3,182.0	-1,353.8	2,958.2	858,544.74	1,472,552.24	39.009950	-107.355914
- plan misses target center by 327.0ft at 4814.6ft MD (3176.0 TVD, -1379.0 N, 2632.2 E)									
- Point									

### Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,046.9	1,046.9	0.0	0.0	KOP @ 1,046.9'
1,796.9	1,667.1	-166.2	317.2	EOB @ Inc. = 60°
4,814.6	3,176.0	-1,379.0	2,632.2	TD @ 4,814.6' MD

# **Gunnison Energy Corporation**

**Gunnison County, CO**

**Deadman Gulch Unit**

**DGU 17-13 CS#2**

**OH**

**Plan #7**

## **Anticollision Report**

**06 January, 2014**

# Cathedral Energy Services

## Anticollision Report

<b>Company:</b>	Gunnison Energy Corporation	<b>Local Co-ordinate Reference:</b>	Well DGU 17-13 CS#2
<b>Project:</b>	Gunnison County, CO	<b>TVD Reference:</b>	KB=20' @ 7305.0ft
<b>Reference Site:</b>	Deadman Gulch Unit	<b>MD Reference:</b>	KB=20' @ 7305.0ft
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	DGU 17-13 CS#2	<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>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #7	<b>Offset TVD Reference:</b>	Offset Datum

<b>Reference</b>	Plan #7
<b>Filter type:</b>	GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of reference
<b>Interpolation Method:</b>	MD Interval 100.0ft
<b>Depth Range:</b>	Unlimited
<b>Results Limited by:</b>	Maximum center-center distance of 500.0ft
<b>Warning Levels Evaluated at:</b>	2.00 Sigma
<b>Error Model:</b>	Systematic Ellipse
<b>Scan Method:</b>	Closest Approach 3D
<b>Error Surface:</b>	Elliptical Conic

Survey Tool Program		Date	1/6/2014		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	4,814.6	Plan #7 (OH)	MWD	MWD	

Summary						
Site Name	Reference Measured Depth	Offset Measured Depth	Distance Between Centres	Distance Between Ellipses	Separation Factor	Warning
Offset Well - Wellbore - Design	()	()	()	()		
- -						Out of range

# Cathedral Energy Services

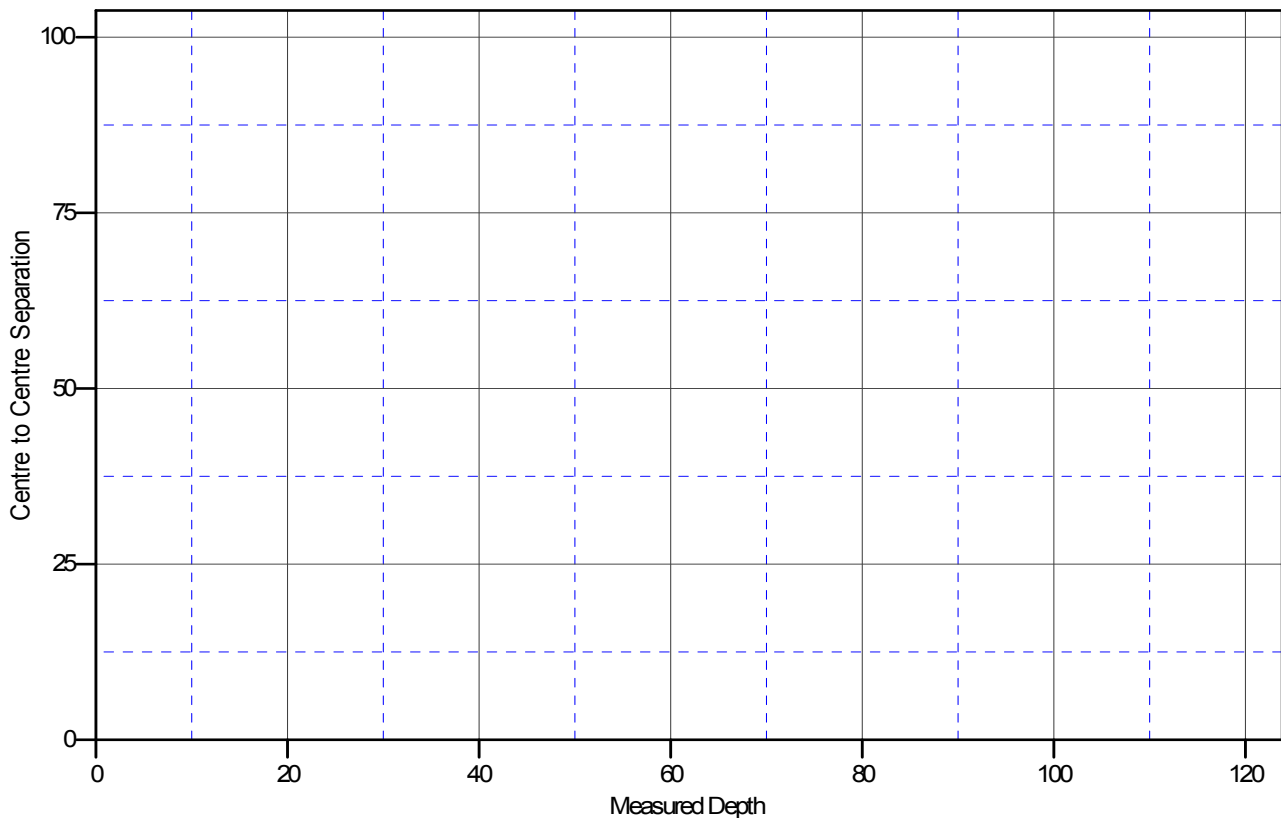
## Anticollision Report

<b>Company:</b>	Gunnison Energy Corporation	<b>Local Co-ordinate Reference:</b>	Well DGU 17-13 CS#2
<b>Project:</b>	Gunnison County, CO	<b>TVD Reference:</b>	KB=20' @ 7305.0ft
<b>Reference Site:</b>	Deadman Gulch Unit	<b>MD Reference:</b>	KB=20' @ 7305.0ft
<b>Site Error:</b>	0.0ft	<b>North Reference:</b>	True
<b>Reference Well:</b>	DGU 17-13 CS#2	<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>	OH	<b>Database:</b>	USA EDM 5000 Multi Users DB
<b>Reference Design:</b>	Plan #7	<b>Offset TVD Reference:</b>	Offset Datum

Reference Depths are relative to KB=20' @ 7305.0ft  
Offset Depths are relative to Offset Datum  
Central Meridian is -105.500000 °

Coordinates are relative to: DGU 17-13 CS#2  
Coordinate System is US State Plane 1927 (Exact solution), Colorado South 503  
Grid Convergence at Surface is: -1.14°

### Ladder Plot



### LEGEND

# **Gunnison Energy Corporation**

**Gunnison County, CO**

**Deadman Gulch Unit**

**DGU 17-13 CS#2**

**OH**

**Plan: Plan #7**

## **Standard Planning Report - Geographic**

**06 January, 2014**



# Cathedral Energy Services

## Planning Report - Geographic

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well DGU 17-13 CS#2
<b>Company:</b>	Gunnison Energy Corporation	<b>TVD Reference:</b>	KB=20' @ 7305.0ft
<b>Project:</b>	Gunnison County, CO	<b>MD Reference:</b>	KB=20' @ 7305.0ft
<b>Site:</b>	Deadman Gulch Unit	<b>North Reference:</b>	True
<b>Well:</b>	DGU 17-13 CS#2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #7		

<b>Project</b>	Gunnison County, CO		
<b>Map System:</b>	US State Plane 1927 (Exact solution)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 (NADCON CONUS)		
<b>Map Zone:</b>	Colorado South 503		

Site		Deadman Gulch Unit			
Site Position:		Northing:	861,395.65 ft	Latitude:	39.017439
From:	Lat/Long	Easting:	1,466,432.79 ft	Longitude:	-107.377642
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.15 °

Well		DGU 17-13 CS#2				
Well Position	+N/-S	0.0 ft	Northing:	859,957.41 ft	Latitude:	39.013667
	+E/-W	0.0 ft	Easting:	1,469,621.73 ft	Longitude:	-107.366322
Position Uncertainty		0.0 ft	Wellhead Elevation:		Ground Level:	7,285.0 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	10/31/2013	9.70	65.39	51,817

<b>Design</b>	Plan #7				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN		<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Direction</b>	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	117.65	

<b>Plan Sections</b>										
<b>Measured Depth</b>	<b>Inclination</b>	<b>Azimuth</b>	<b>Vertical Depth</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Dogleg Rate</b>	<b>Build Rate</b>	<b>Turn Rate</b>	<b>TFO</b>	<b>Target</b>
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,046.9	0.00	0.00	1,046.9	0.0	0.0	0.00	0.00	0.00	0.00	
1,796.9	60.00	117.65	1,667.1	-166.2	317.2	8.00	8.00	0.00	117.65	
4,814.6	60.00	117.65	3,176.0	-1,379.0	2,632.2	0.00	0.00	0.00	0.00	DGU 17-13 CS#2 PBI

# Cathedral Energy Services

## Planning Report - Geographic

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well DGU 17-13 CS#2
<b>Company:</b>	Gunnison Energy Corporation	<b>TVD Reference:</b>	KB=20' @ 7305.0ft
<b>Project:</b>	Gunnison County, CO	<b>MD Reference:</b>	KB=20' @ 7305.0ft
<b>Site:</b>	Deadman Gulch Unit	<b>North Reference:</b>	True
<b>Well:</b>	DGU 17-13 CS#2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #7		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	859,957.41	1,469,621.73	39.013667	-107.366322
100.0	0.00	0.00	100.0	0.0	0.0	859,957.41	1,469,621.73	39.013667	-107.366322
200.0	0.00	0.00	200.0	0.0	0.0	859,957.41	1,469,621.73	39.013667	-107.366322
300.0	0.00	0.00	300.0	0.0	0.0	859,957.41	1,469,621.73	39.013667	-107.366322
400.0	0.00	0.00	400.0	0.0	0.0	859,957.41	1,469,621.73	39.013667	-107.366322
500.0	0.00	0.00	500.0	0.0	0.0	859,957.41	1,469,621.73	39.013667	-107.366322
600.0	0.00	0.00	600.0	0.0	0.0	859,957.41	1,469,621.73	39.013667	-107.366322
700.0	0.00	0.00	700.0	0.0	0.0	859,957.41	1,469,621.73	39.013667	-107.366322
800.0	0.00	0.00	800.0	0.0	0.0	859,957.41	1,469,621.73	39.013667	-107.366322
900.0	0.00	0.00	900.0	0.0	0.0	859,957.41	1,469,621.73	39.013667	-107.366322
1,000.0	0.00	0.00	1,000.0	0.0	0.0	859,957.41	1,469,621.73	39.013667	-107.366322
1,046.9	0.00	0.00	1,046.9	0.0	0.0	859,957.41	1,469,621.73	39.013667	-107.366322
<b>KOP @ 1,046.9'</b>									
1,050.0	0.25	117.65	1,050.0	0.0	0.0	859,957.41	1,469,621.73	39.013667	-107.366322
1,100.0	4.25	117.65	1,100.0	-0.9	1.7	859,956.46	1,469,623.45	39.013665	-107.366316
1,150.0	8.25	117.65	1,149.6	-3.4	6.6	859,953.84	1,469,628.22	39.013658	-107.366299
1,200.0	12.25	117.65	1,198.8	-7.6	14.4	859,949.56	1,469,636.01	39.013646	-107.366271
1,250.0	16.25	117.65	1,247.3	-13.3	25.3	859,943.63	1,469,646.80	39.013631	-107.366233
1,300.0	20.25	117.65	1,294.8	-20.5	39.2	859,936.09	1,469,660.51	39.013611	-107.366184
1,350.0	24.25	117.65	1,341.0	-29.3	56.0	859,926.97	1,469,677.10	39.013587	-107.366125
1,400.0	28.25	117.65	1,385.9	-39.6	75.6	859,916.33	1,469,696.48	39.013558	-107.366056
1,450.0	32.25	117.65	1,429.1	-51.3	97.9	859,904.20	1,469,718.54	39.013526	-107.365978
1,500.0	36.25	117.65	1,470.4	-64.3	122.8	859,890.64	1,469,743.20	39.013490	-107.365890
1,550.0	40.25	117.65	1,509.6	-78.7	150.2	859,875.74	1,469,770.32	39.013451	-107.365794
1,600.0	44.25	117.65	1,546.6	-94.3	180.0	859,859.55	1,469,799.77	39.013408	-107.365689
1,650.0	48.25	117.65	1,581.2	-111.0	212.0	859,842.16	1,469,831.42	39.013362	-107.365577
1,700.0	52.25	117.65	1,613.2	-128.9	246.0	859,823.64	1,469,865.10	39.013313	-107.365457
1,750.0	56.25	117.65	1,642.4	-147.7	281.9	859,804.10	1,469,900.65	39.013262	-107.365330
1,796.9	60.00	117.65	1,667.1	-166.2	317.2	859,784.92	1,469,935.55	39.013211	-107.365206
<b>EOB @ Inc. = 60°</b>									
1,800.0	60.00	117.65	1,668.7	-167.4	319.6	859,783.63	1,469,937.90	39.013207	-107.365198
1,900.0	60.00	117.65	1,718.7	-207.6	396.3	859,741.91	1,470,013.80	39.013097	-107.364928
2,000.0	60.00	117.65	1,768.7	-247.8	473.0	859,700.20	1,470,089.69	39.012987	-107.364658
2,100.0	60.00	117.65	1,818.7	-288.0	549.7	859,658.48	1,470,165.58	39.012876	-107.364388
2,200.0	60.00	117.65	1,868.7	-328.2	626.4	859,616.77	1,470,241.48	39.012766	-107.364118
2,300.0	60.00	117.65	1,918.7	-368.4	703.1	859,575.05	1,470,317.37	39.012656	-107.363848
2,400.0	60.00	117.65	1,968.7	-408.6	779.9	859,533.34	1,470,393.26	39.012545	-107.363578
2,500.0	60.00	117.65	2,018.7	-448.8	856.6	859,491.62	1,470,469.16	39.012435	-107.363308
2,600.0	60.00	117.65	2,068.7	-489.0	933.3	859,449.91	1,470,545.05	39.012325	-107.363039
2,700.0	60.00	117.65	2,118.7	-529.1	1,010.0	859,408.19	1,470,620.95	39.012214	-107.362769
2,800.0	60.00	117.65	2,168.7	-569.3	1,086.7	859,366.48	1,470,696.84	39.012104	-107.362499
2,900.0	60.00	117.65	2,218.7	-609.5	1,163.4	859,324.77	1,470,772.73	39.011994	-107.362229
3,000.0	60.00	117.65	2,268.7	-649.7	1,240.1	859,283.05	1,470,848.63	39.011883	-107.361959
3,100.0	60.00	117.65	2,318.7	-689.9	1,316.8	859,241.34	1,470,924.52	39.011773	-107.361689
3,200.0	60.00	117.65	2,368.7	-730.1	1,393.6	859,199.62	1,471,000.42	39.011663	-107.361419
3,300.0	60.00	117.65	2,418.7	-770.3	1,470.3	859,157.91	1,471,076.31	39.011552	-107.361149
3,400.0	60.00	117.65	2,468.7	-810.5	1,547.0	859,116.19	1,471,152.20	39.011442	-107.360879
3,500.0	60.00	117.65	2,518.7	-850.7	1,623.7	859,074.48	1,471,228.10	39.011332	-107.360609
3,600.0	60.00	117.65	2,568.7	-890.9	1,700.4	859,032.76	1,471,303.99	39.011221	-107.360339
3,700.0	60.00	117.65	2,618.7	-931.0	1,777.1	858,991.05	1,471,379.89	39.011111	-107.360070
3,800.0	60.00	117.65	2,668.7	-971.2	1,853.8	858,949.33	1,471,455.78	39.011001	-107.359800
3,900.0	60.00	117.65	2,718.7	-1,011.4	1,930.5	858,907.62	1,471,531.67	39.010890	-107.359530
4,000.0	60.00	117.65	2,768.7	-1,051.6	2,007.2	858,865.90	1,471,607.57	39.010780	-107.359260
4,100.0	60.00	117.65	2,818.7	-1,091.8	2,084.0	858,824.19	1,471,683.46	39.010670	-107.358990

# Cathedral Energy Services

## Planning Report - Geographic

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well DGU 17-13 CS#2
<b>Company:</b>	Gunnison Energy Corporation	<b>TVD Reference:</b>	KB=20' @ 7305.0ft
<b>Project:</b>	Gunnison County, CO	<b>MD Reference:</b>	KB=20' @ 7305.0ft
<b>Site:</b>	Deadman Gulch Unit	<b>North Reference:</b>	True
<b>Well:</b>	DGU 17-13 CS#2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #7		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude	
4,200.0	60.00	117.65	2,868.7	-1,132.0	2,160.7	858,782.47	1,471,759.35	39.010559	-107.358720	
4,300.0	60.00	117.65	2,918.7	-1,172.2	2,237.4	858,740.76	1,471,835.25	39.010449	-107.358450	
4,400.0	60.00	117.65	2,968.7	-1,212.4	2,314.1	858,699.04	1,471,911.14	39.010339	-107.358180	
4,500.0	60.00	117.65	3,018.7	-1,252.6	2,390.8	858,657.33	1,471,987.04	39.010228	-107.357910	
4,600.0	60.00	117.65	3,068.7	-1,292.8	2,467.5	858,615.62	1,472,062.93	39.010118	-107.357640	
4,700.0	60.00	117.65	3,118.7	-1,332.9	2,544.2	858,573.90	1,472,138.82	39.010008	-107.357371	
4,800.0	60.00	117.65	3,168.7	-1,373.1	2,620.9	858,532.19	1,472,214.72	39.009897	-107.357101	
4,814.6	60.00	117.65	3,176.0	-1,379.0	2,632.2	858,526.09	1,472,225.81	39.009881	-107.357061	
TD @ 4,814.6' MD										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude	
- hit/miss target										
- Shape										
DGU 17-13 CS#2 PBHL	0.00	358.86	3,176.0	-1,379.0	2,632.2	858,526.09	1,472,225.81	39.009881	-107.357061	
- plan hits target center										
- Point										

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,046.9	1,046.9	0.0	0.0	KOP @ 1,046.9'	
1,796.9	1,667.1	-166.2	317.2	EOB @ Inc. = 60°	
4,814.6	3,176.0	-1,379.0	2,632.2	TD @ 4,814.6' MD	