

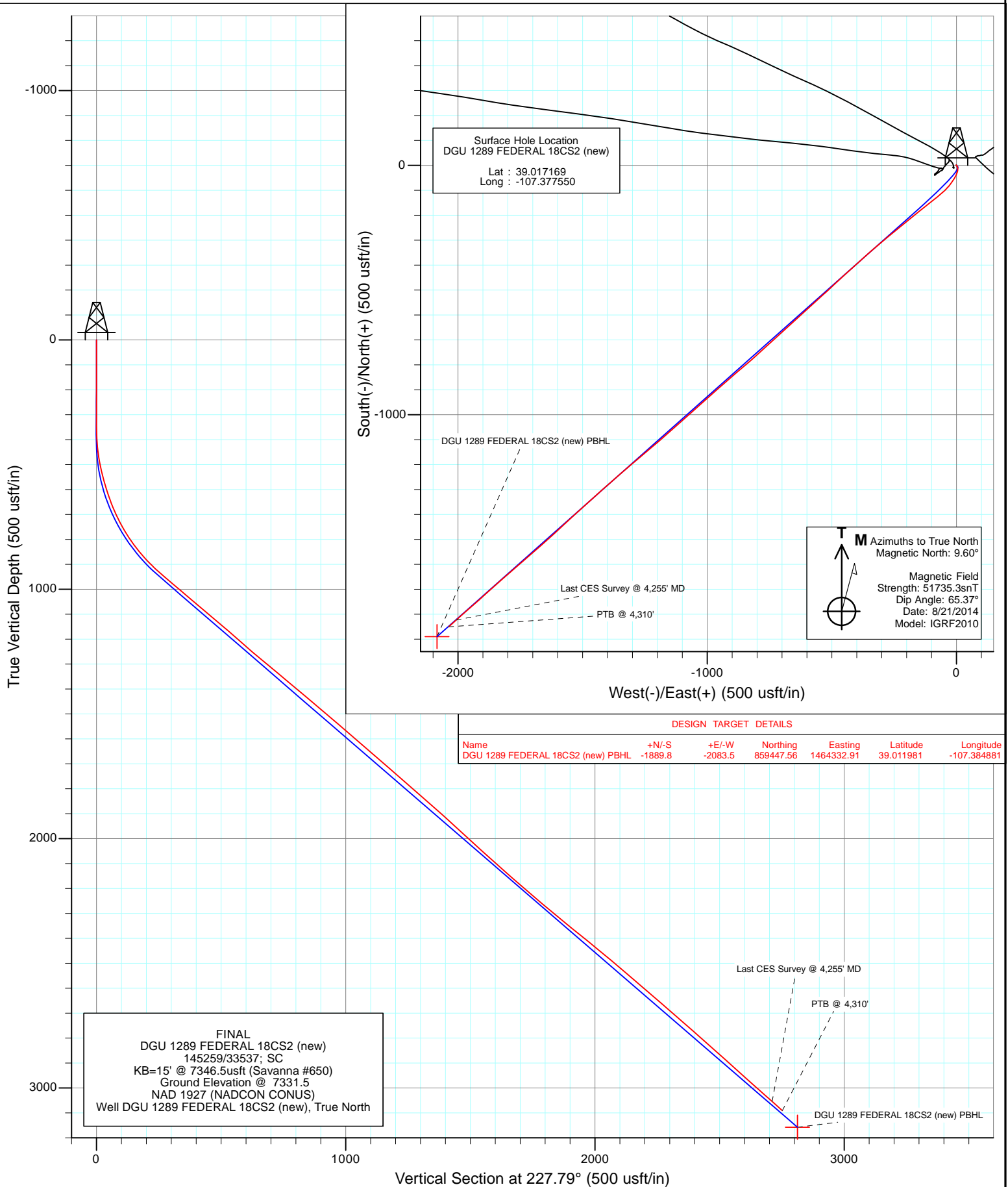


**GUNNISON ENERGY CORPORATION**

Project: Gunnison County, CO  
Site: Deadman Gulch Unit  
Well: DGU 1289 FEDERAL 18CS2 (new)  
Wellbore: DD  
Design: FINAL



**CATHEDRAL**



# Cathedral Energy Services

## Survey Report

<b>Company:</b>	Gunnison Energy Corporation	<b>Local Co-ordinate Reference:</b>	Well DGU 1289 FEDERAL 18CS2 (new)
<b>Project:</b>	Gunnison County, CO	<b>TVD Reference:</b>	KB=15' @ 7346.5usft (Savanna #650)
<b>Site:</b>	Deadman Gulch Unit	<b>MD Reference:</b>	KB=15' @ 7346.5usft (Savanna #650)
<b>Well:</b>	DGU 1289 FEDERAL 18CS2 (new)	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

<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:	861,393.93 usft	Latitude:	39.017439
From:	Lat/Long	Easting:	1,466,429.86 usft	Longitude:	-107.377642
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-1.15 °

Well	DGU 1289 FEDERAL 18CS2 (new)					
Well Position	+N/-S	0.0 usft	Northing:	861,295.06 usft	Latitude:	39.017169
	+E/-W	0.0 usft	Easting:	1,466,454.02 usft	Longitude:	-107.377550
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	7,331.5 usft

<b>Wellbore</b>	DD				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	8/21/2014	9.60	65.37	51,735

<b>Design</b>	FINAL				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	227.79	

<b>Survey Program</b>	<b>Date</b>	8/29/2014			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
151.0	4,310.0	Survey #1 (DD)	ISCWSA MWD	MWD - ISCWSA	

<b>Survey</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Vertical Section (usft)</b>	<b>Dogleg Rate (°/100usf)</b>	<b>Build Rate (°/100u)</b>	<b>Formations / Comments</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00		
151.0	0.80	301.40	151.0	0.5	-0.9	0.3	0.53	0.53		
216.0	0.10	130.80	216.0	0.7	-1.2	0.4	1.38	-1.08		
278.0	1.80	132.00	278.0	0.1	-0.5	0.3	2.74	2.74		
309.0	3.00	129.10	309.0	-0.8	0.5	0.1	3.89	3.87		
373.0	6.40	151.80	372.7	-5.0	3.5	0.8	5.96	5.31		
436.0	9.70	175.90	435.1	-13.4	5.5	4.9	7.39	5.24		
499.0	12.80	195.30	496.9	-25.4	4.1	14.0	7.70	4.92		
563.0	16.40	206.30	558.9	-40.3	-1.8	28.4	7.08	5.62		
626.0	19.20	212.80	618.8	-57.0	-11.4	46.7	5.44	4.44		
689.0	23.00	217.10	677.6	-75.6	-24.4	68.8	6.51	6.03		
752.0	28.00	224.50	734.5	-95.9	-42.2	95.7	9.40	7.94		
816.0	33.00	230.50	789.6	-117.8	-66.2	128.2	9.14	7.81		

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	Gunnison Energy Corporation	<b>Local Co-ordinate Reference:</b>	Well DGU 1289 FEDERAL 18CS2 (new)
<b>Project:</b>	Gunnison County, CO	<b>TVD Reference:</b>	KB=15' @ 7346.5usft (Savanna #650)
<b>Site:</b>	Deadman Gulch Unit	<b>MD Reference:</b>	KB=15' @ 7346.5usft (Savanna #650)
<b>Well:</b>	DGU 1289 FEDERAL 18CS2 (new)	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100u)	Formations / Comments
879.0	38.60	231.60	840.7	-140.9	-94.9	164.9	8.95	8.89	
942.0	43.80	231.30	888.1	-166.8	-127.3	206.3	8.26	8.25	
1,000.0	48.10	231.30	928.4	-192.8	-159.8	247.9	7.41	7.41	
1,056.0	50.00	231.40	965.1	-219.2	-192.9	290.1	3.40	3.39	
1,119.0	49.40	230.50	1,005.8	-249.5	-230.2	338.1	1.45	-0.95	
1,182.0	49.70	230.10	1,046.7	-280.1	-267.1	386.0	0.68	0.48	
1,245.0	49.90	229.90	1,087.4	-311.1	-303.9	434.1	0.40	0.32	
1,309.0	50.00	228.80	1,128.6	-343.0	-341.1	483.1	1.32	0.16	
1,372.0	49.20	228.40	1,169.4	-374.7	-377.1	531.0	1.36	-1.27	
1,435.0	48.70	227.40	1,210.8	-406.5	-412.3	578.5	1.44	-0.79	
1,499.0	49.70	227.60	1,252.6	-439.3	-448.0	627.0	1.58	1.56	
1,562.0	50.00	227.70	1,293.2	-471.7	-483.6	675.1	0.49	0.48	
1,625.0	50.50	227.00	1,333.5	-504.5	-519.3	723.6	1.17	0.79	
1,688.0	49.80	228.20	1,373.9	-537.2	-555.0	771.9	1.84	-1.11	
1,752.0	49.70	227.60	1,415.2	-569.9	-591.2	820.8	0.73	-0.16	
1,815.0	49.90	227.90	1,455.9	-602.3	-626.8	868.9	0.48	0.32	
1,878.0	50.20	227.20	1,496.3	-634.8	-662.5	917.2	0.98	0.48	
1,941.0	49.70	228.20	1,536.9	-667.3	-698.1	965.4	1.45	-0.79	
2,005.0	49.30	228.10	1,578.4	-699.8	-734.4	1,014.1	0.64	-0.62	
2,068.0	49.30	227.00	1,619.5	-732.0	-769.6	1,061.9	1.32	0.00	
2,131.0	48.90	228.00	1,660.8	-764.2	-804.7	1,109.5	1.36	-0.63	
2,194.0	48.10	229.20	1,702.5	-795.4	-840.1	1,156.7	1.91	-1.27	
2,258.0	49.00	229.90	1,744.9	-826.5	-876.6	1,204.6	1.63	1.41	
2,321.0	49.10	229.30	1,786.2	-857.3	-912.9	1,252.2	0.74	0.16	
2,384.0	48.90	228.70	1,827.5	-888.5	-948.8	1,299.7	0.79	-0.32	
2,447.0	48.80	228.40	1,869.0	-919.9	-984.3	1,347.1	0.39	-0.16	
2,511.0	48.20	227.60	1,911.4	-952.0	-1,019.9	1,395.1	1.32	-0.94	
2,574.0	47.60	228.50	1,953.6	-983.3	-1,054.7	1,441.8	1.42	-0.95	
2,637.0	47.10	228.80	1,996.3	-1,013.9	-1,089.5	1,488.1	0.87	-0.79	
2,701.0	47.60	228.40	2,039.6	-1,045.0	-1,124.8	1,535.2	0.91	0.78	
2,764.0	48.40	228.40	2,081.8	-1,076.1	-1,159.8	1,582.0	1.27	1.27	
2,827.0	48.80	229.20	2,123.5	-1,107.2	-1,195.4	1,629.3	1.14	0.63	
2,890.0	48.70	229.90	2,165.0	-1,137.9	-1,231.4	1,676.6	0.85	-0.16	
2,953.0	49.20	229.90	2,206.4	-1,168.5	-1,267.7	1,724.1	0.79	0.79	
3,017.0	49.30	229.60	2,248.2	-1,199.9	-1,304.7	1,772.5	0.39	0.16	
3,080.0	50.10	229.10	2,288.9	-1,231.2	-1,341.2	1,820.6	1.41	1.27	
3,143.0	51.30	228.50	2,328.8	-1,263.3	-1,377.9	1,869.3	2.04	1.90	
3,206.0	51.00	228.90	2,368.3	-1,295.7	-1,414.7	1,918.4	0.69	-0.48	
3,270.0	50.80	228.00	2,408.7	-1,328.6	-1,451.9	1,968.0	1.14	-0.31	
3,333.0	50.70	227.80	2,448.5	-1,361.3	-1,488.1	2,016.8	0.29	-0.16	
3,396.0	50.10	227.30	2,488.7	-1,394.1	-1,523.9	2,065.4	1.13	-0.95	
3,459.0	49.50	227.60	2,529.4	-1,426.6	-1,559.4	2,113.5	1.02	-0.95	
3,523.0	49.40	226.70	2,571.0	-1,459.7	-1,595.0	2,162.1	1.08	-0.16	
3,586.0	49.40	228.40	2,612.0	-1,492.0	-1,630.3	2,209.9	2.05	0.00	
3,649.0	48.70	228.40	2,653.3	-1,523.6	-1,665.9	2,257.5	1.11	-1.11	
3,712.0	48.70	228.70	2,694.8	-1,554.9	-1,701.4	2,304.8	0.36	0.00	
3,775.0	49.30	230.00	2,736.2	-1,585.9	-1,737.4	2,352.4	1.83	0.95	
3,839.0	49.00	229.30	2,778.0	-1,617.2	-1,774.3	2,400.8	0.95	-0.47	
3,902.0	48.70	228.50	2,819.5	-1,648.4	-1,810.1	2,448.2	1.07	-0.48	
3,965.0	47.90	227.90	2,861.4	-1,679.7	-1,845.2	2,495.2	1.46	-1.27	
4,028.0	47.90	227.60	2,903.6	-1,711.2	-1,879.8	2,542.0	0.35	0.00	
4,091.0	48.20	229.00	2,945.8	-1,742.3	-1,914.7	2,588.8	1.72	0.48	
4,154.0	48.30	229.20	2,987.7	-1,773.1	-1,950.3	2,635.8	0.29	0.16	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	Gunnison Energy Corporation	<b>Local Co-ordinate Reference:</b>	Well DGU 1289 FEDERAL 18CS2 (new)
<b>Project:</b>	Gunnison County, CO	<b>TVD Reference:</b>	KB=15' @ 7346.5usft (Savanna #650)
<b>Site:</b>	Deadman Gulch Unit	<b>MD Reference:</b>	KB=15' @ 7346.5usft (Savanna #650)
<b>Well:</b>	DGU 1289 FEDERAL 18CS2 (new)	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usf)	Build Rate (°/100u)	Formations / Comments
4,218.0	48.40	228.50	3,030.2	-1,804.6	-1,986.3	2,683.6	0.83	0.16	
4,255.0	48.40	227.80	3,054.8	-1,823.0	-2,006.9	2,711.3	1.41	0.00	Last CES Survey @ 4,255' MD
4,310.0	48.40	227.80	3,091.3	-1,850.7	-2,037.4	2,752.4	0.00	0.00	PTB @ 4,310'

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
DGU 1289 FEDERAL 18CS2	0.00	0.00	3,158.0	-1,889.8	-2,083.5	859,447.56	1,464,332.91	39.011981	-107.384881
- actual wellpath misses target center by 90.0usft at 4310.0usft MD (3091.3 TVD, -1850.7 N, -2037.4 E)									
- Point									

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
4,255.0	3,054.8	-1,823.0	-2,006.9	Last CES Survey @ 4,255' MD	
4,310.0	3,091.3	-1,850.7	-2,037.4	PTB @ 4,310'	

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_

# **Gunnison Energy Corporation**

**Gunnison County, CO**

**Deadman Gulch Unit**

**DGU 1289 FEDERAL 18CS2 (new)**

**DD**

**Design: FINAL**

## **Survey Report - Geographic**

**29 August, 2014**

# Cathedral Energy Services

## Survey Report - Geographic

<b>Company:</b>	Gunnison Energy Corporation	<b>Local Co-ordinate Reference:</b>	Well DGU 1289 FEDERAL 18CS2 (new)
<b>Project:</b>	Gunnison County, CO	<b>TVD Reference:</b>	KB=15' @ 7346.5usft (Savanna #650)
<b>Site:</b>	Deadman Gulch Unit	<b>MD Reference:</b>	KB=15' @ 7346.5usft (Savanna #650)
<b>Well:</b>	DGU 1289 FEDERAL 18CS2 (new)	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

<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:	861,393.93 usft	Latitude:	39.017439
From:	Lat/Long	Easting:	1,466,429.86 usft	Longitude:	-107.377642
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-1.15 °

Well	DGU 1289 FEDERAL 18CS2 (new)					
Well Position	+N/-S	0.0 usft	Northing:	861,295.06 usft	Latitude:	39.017169
	+E/-W	0.0 usft	Easting:	1,466,454.02 usft	Longitude:	-107.377550
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	7,331.5 usft

<b>Wellbore</b>	DD				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	8/21/2014	9.60	65.37	51,735

<b>Design</b>	FINAL				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	227.79	

<b>Survey Program</b>	<b>Date</b>	8/29/2014			
<b>From (usft)</b>	<b>To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
151.0	4,310.0	Survey #1 (DD)	ISCWSA MWD	MWD - ISCWSA	

<b>Survey</b>										
<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Map Northing (usft)</b>	<b>Map Easting (usft)</b>	<b>Latitude</b>	<b>Longitude</b>	
0.0	0.00	0.00	0.0	0.0	0.0	861,295.06	1,466,454.02	39.017169	-107.377550	
151.0	0.80	301.40	151.0	0.5	-0.9	861,295.63	1,466,453.14	39.017171	-107.377553	
216.0	0.10	130.80	216.0	0.7	-1.2	861,295.84	1,466,452.80	39.017171	-107.377555	
278.0	1.80	132.00	278.0	0.1	-0.5	861,295.13	1,466,453.55	39.017169	-107.377552	
309.0	3.00	129.10	309.0	-0.8	0.5	861,294.28	1,466,454.52	39.017167	-107.377548	
373.0	6.40	151.80	372.7	-5.0	3.5	861,290.02	1,466,457.42	39.017155	-107.377538	
436.0	9.70	175.90	435.1	-13.4	5.5	861,281.58	1,466,459.29	39.017132	-107.377531	
499.0	12.80	195.30	496.9	-25.4	4.1	861,269.58	1,466,457.59	39.017099	-107.377536	
563.0	16.40	206.30	558.9	-40.3	-1.8	861,254.76	1,466,451.41	39.017058	-107.377557	
626.0	19.20	212.80	618.8	-57.0	-11.4	861,238.27	1,466,441.52	39.017012	-107.377590	
689.0	23.00	217.10	677.6	-75.6	-24.4	861,220.00	1,466,428.11	39.016962	-107.377636	
752.0	28.00	224.50	734.5	-95.9	-42.2	861,199.98	1,466,409.90	39.016906	-107.377699	

# Cathedral Energy Services

## Survey Report - Geographic

<b>Company:</b>	Gunnison Energy Corporation	<b>Local Co-ordinate Reference:</b>	Well DGU 1289 FEDERAL 18CS2 (new)
<b>Project:</b>	Gunnison County, CO	<b>TVD Reference:</b>	KB=15' @ 7346.5usft (Savanna #650)
<b>Site:</b>	Deadman Gulch Unit	<b>MD Reference:</b>	KB=15' @ 7346.5usft (Savanna #650)
<b>Well:</b>	DGU 1289 FEDERAL 18CS2 (new)	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
816.0	33.00	230.50	789.6	-117.8	-66.2	861,178.65	1,466,385.47	39.016846	-107.377783
879.0	38.60	231.60	840.7	-140.9	-94.9	861,156.09	1,466,356.35	39.016782	-107.377884
942.0	43.80	231.30	888.1	-166.8	-127.3	861,130.89	1,466,323.39	39.016711	-107.377998
1,000.0	48.10	231.30	928.4	-192.8	-159.8	861,105.49	1,466,290.35	39.016640	-107.378113
1,056.0	50.00	231.40	965.1	-219.2	-192.9	861,079.75	1,466,256.80	39.016567	-107.378229
1,119.0	49.40	230.50	1,005.8	-249.5	-230.2	861,050.23	1,466,218.88	39.016484	-107.378360
1,182.0	49.70	230.10	1,046.7	-280.1	-267.1	861,020.36	1,466,181.39	39.016400	-107.378490
1,245.0	49.90	229.90	1,087.4	-311.1	-303.9	860,990.18	1,466,143.91	39.016315	-107.378620
1,309.0	50.00	228.80	1,128.6	-343.0	-341.1	860,959.01	1,466,106.11	39.016228	-107.378750
1,372.0	49.20	228.40	1,169.4	-374.7	-377.1	860,928.02	1,466,069.49	39.016140	-107.378877
1,435.0	48.70	227.40	1,210.8	-406.5	-412.3	860,896.88	1,466,033.61	39.016053	-107.379001
1,499.0	49.70	227.60	1,252.6	-439.3	-448.0	860,864.88	1,465,997.24	39.015963	-107.379127
1,562.0	50.00	227.70	1,293.2	-471.7	-483.6	860,833.16	1,465,961.00	39.015874	-107.379252
1,625.0	50.50	227.00	1,333.5	-504.5	-519.3	860,801.06	1,465,924.73	39.015784	-107.379377
1,688.0	49.80	228.20	1,373.9	-537.2	-555.0	860,769.17	1,465,888.36	39.015694	-107.379503
1,752.0	49.70	227.60	1,415.2	-569.9	-591.2	860,737.16	1,465,851.47	39.015605	-107.379631
1,815.0	49.90	227.90	1,455.9	-602.3	-626.8	860,705.53	1,465,815.21	39.015516	-107.379756
1,878.0	50.20	227.20	1,496.3	-634.8	-662.5	860,673.66	1,465,778.93	39.015426	-107.379881
1,941.0	49.70	228.20	1,536.9	-667.3	-698.1	860,641.92	1,465,742.61	39.015337	-107.380007
2,005.0	49.30	228.10	1,578.4	-699.8	-734.4	860,610.19	1,465,705.72	39.015248	-107.380134
2,068.0	49.30	227.00	1,619.5	-732.0	-769.6	860,578.67	1,465,669.84	39.015160	-107.380258
2,131.0	48.90	228.00	1,660.8	-764.2	-804.7	860,547.21	1,465,634.09	39.015071	-107.380382
2,194.0	48.10	229.20	1,702.5	-795.4	-840.1	860,516.72	1,465,598.08	39.014986	-107.380506
2,258.0	49.00	229.90	1,744.9	-826.5	-876.6	860,486.34	1,465,560.96	39.014900	-107.380635
2,321.0	49.10	229.30	1,786.2	-857.3	-912.9	860,456.24	1,465,524.11	39.014815	-107.380762
2,384.0	48.90	228.70	1,827.5	-888.5	-948.8	860,425.77	1,465,487.60	39.014730	-107.380889
2,447.0	48.80	228.40	1,869.0	-919.9	-984.3	860,395.09	1,465,451.42	39.014644	-107.381014
2,511.0	48.20	227.60	1,911.4	-952.0	-1,019.9	860,363.74	1,465,415.17	39.014556	-107.381139
2,574.0	47.60	228.50	1,953.6	-983.3	-1,054.7	860,333.20	1,465,379.78	39.014470	-107.381261
2,637.0	47.10	228.80	1,996.3	-1,013.9	-1,089.5	860,303.29	1,465,344.39	39.014386	-107.381384
2,701.0	47.60	228.40	2,039.6	-1,045.0	-1,124.8	860,272.88	1,465,308.46	39.014300	-107.381508
2,764.0	48.40	228.40	2,081.8	-1,076.1	-1,159.8	860,242.50	1,465,272.83	39.014215	-107.381631
2,827.0	48.80	229.20	2,123.5	-1,107.2	-1,195.4	860,212.10	1,465,236.66	39.014129	-107.381756
2,890.0	48.70	229.90	2,165.0	-1,137.9	-1,231.4	860,182.10	1,465,200.00	39.014045	-107.381883
2,953.0	49.20	229.90	2,206.4	-1,168.5	-1,267.7	860,152.23	1,465,163.05	39.013961	-107.382011
3,017.0	49.30	229.60	2,248.2	-1,199.9	-1,304.7	860,121.66	1,465,125.43	39.013875	-107.382141
3,080.0	50.10	229.10	2,288.9	-1,231.2	-1,341.2	860,091.09	1,465,088.35	39.013789	-107.382269
3,143.0	51.30	228.50	2,328.8	-1,263.3	-1,377.9	860,059.72	1,465,051.04	39.013701	-107.382398
3,206.0	51.00	228.90	2,368.3	-1,295.7	-1,414.7	860,028.09	1,465,013.53	39.013612	-107.382528
3,270.0	50.80	228.00	2,408.7	-1,328.6	-1,451.9	859,995.90	1,464,975.71	39.013522	-107.382659
3,333.0	50.70	227.80	2,448.5	-1,361.3	-1,488.1	859,963.93	1,464,938.86	39.013432	-107.382786
3,396.0	50.10	227.30	2,488.7	-1,394.1	-1,523.9	859,931.89	1,464,902.39	39.013342	-107.382912
3,459.0	49.50	227.60	2,529.4	-1,426.6	-1,559.4	859,900.07	1,464,866.30	39.013253	-107.383037
3,523.0	49.40	226.70	2,571.0	-1,459.7	-1,595.0	859,867.72	1,464,829.99	39.013162	-107.383162
3,586.0	49.40	228.40	2,612.0	-1,492.0	-1,630.3	859,836.15	1,464,794.05	39.013073	-107.383287
3,649.0	48.70	228.40	2,653.3	-1,523.6	-1,665.9	859,805.29	1,464,757.84	39.012986	-107.383412
3,712.0	48.70	228.70	2,694.8	-1,554.9	-1,701.4	859,774.67	1,464,721.75	39.012900	-107.383537
3,775.0	49.30	230.00	2,736.2	-1,585.9	-1,737.4	859,744.43	1,464,685.06	39.012815	-107.383664
3,839.0	49.00	229.30	2,778.0	-1,617.2	-1,774.3	859,713.84	1,464,647.54	39.012729	-107.383793
3,902.0	48.70	228.50	2,819.5	-1,648.4	-1,810.1	859,683.38	1,464,611.17	39.012644	-107.383919
3,965.0	47.90	227.90	2,861.4	-1,679.7	-1,845.2	859,652.74	1,464,575.48	39.012558	-107.384043
4,028.0	47.90	227.60	2,903.6	-1,711.2	-1,879.8	859,622.01	1,464,540.26	39.012471	-107.384164
4,091.0	48.20	229.00	2,945.8	-1,742.3	-1,914.7	859,591.56	1,464,504.65	39.012386	-107.384287
4,154.0	48.30	229.20	2,987.7	-1,773.1	-1,950.3	859,561.50	1,464,468.52	39.012301	-107.384412
4,218.0	48.40	228.50	3,030.2	-1,804.6	-1,986.3	859,530.76	1,464,431.88	39.012215	-107.384539

# Cathedral Energy Services

## Survey Report - Geographic

<b>Company:</b>	Gunnison Energy Corporation	<b>Local Co-ordinate Reference:</b>	Well DGU 1289 FEDERAL 18CS2 (new)
<b>Project:</b>	Gunnison County, CO	<b>TVD Reference:</b>	KB=15' @ 7346.5usft (Savanna #650)
<b>Site:</b>	Deadman Gulch Unit	<b>MD Reference:</b>	KB=15' @ 7346.5usft (Savanna #650)
<b>Well:</b>	DGU 1289 FEDERAL 18CS2 (new)	<b>North Reference:</b>	True
<b>Wellbore:</b>	DD	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,255.0	48.40	227.80	3,054.8	-1,823.0	-2,006.9	859,512.72	1,464,410.91	39.012164	-107.384612
<b>Last CES Survey @ 4,255' MD</b>									
4,310.0	48.40	227.80	3,091.3	-1,850.7	-2,037.4	859,485.71	1,464,379.89	39.012088	-107.384719
<b>PTB @ 4,310'</b>									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
DGU 1289 FEDERAL 18CS2	0.00	0.00	3,158.0	-1,889.8	-2,083.5	859,447.56	1,464,332.91	39.011981	-107.384881
- actual wellpath misses target center by 90.0usft at 4310.0usft MD (3091.3 TVD, -1850.7 N, -2037.4 E)									
- Point									

Design Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
4,255.0	3,054.8	-1,823.0	-2,006.9	Last CES Survey @ 4,255' MD	
4,310.0	3,091.3	-1,850.7	-2,037.4	PTB @ 4,310'	

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_