

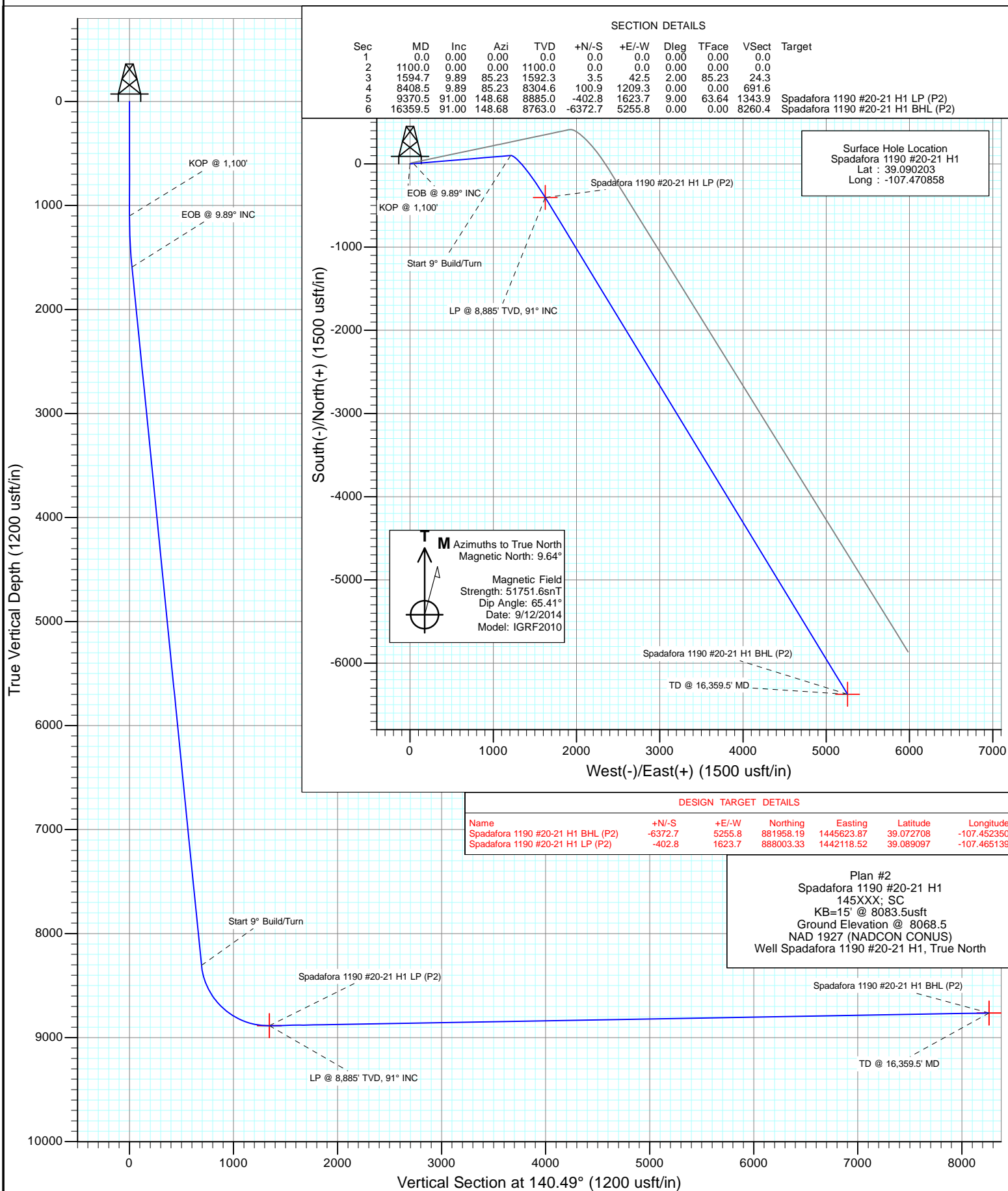


GUNNISON ENERGY CORPORATION

Project: Gunnison County, CO
Site: Spadafora (S20-T11S-R90W)
Well: Spadafora 1190 #20-21 H1
Wellbore: HZ
Design: Plan #2



CATHEDRAL



Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Spadafora 1190 #20-21 H1
Company:	Gunnison Energy Corporation	TVD Reference:	KB=15' @ 8083.5usft
Project:	Gunnison County, CO	MD Reference:	KB=15' @ 8083.5usft
Site:	Spadafora (S20-T11S-R90W)	North Reference:	True
Well:	Spadafora 1190 #20-21 H1	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

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

Site		Spadafora (S20-T11S-R90W)			
Site Position:		Northing:	888,521.89 usft	Latitude:	39.090428
From:	Lat/Long	Easting:	1,440,528.84 usft	Longitude:	-107.470776
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-1.21 °

Well	Spadafora 1190 #20-21 H1					
Well Position	+N/-S	0.0 usft	Northing:	888,440.33 usft	Latitude:	39.090203
	+E/-W	0.0 usft	Easting:	1,440,503.70 usft	Longitude:	-107.470858
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	8,068.5 usft

Wellbore	HZ				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	9/12/2014	9.65	65.41	51,752

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction
	(usft)	(usft)	(usft)	(°)
	0.0	0.0	0.0	140.49

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)	(°)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,594.7	9.89	85.23	1,592.3	3.5	42.5	2.00	2.00	0.00	85.23	
8,408.5	9.89	85.23	8,304.6	100.9	1,209.3	0.00	0.00	0.00	0.00	
9,370.5	91.00	148.68	8,885.0	-402.8	1,623.7	9.00	8.43	6.60	63.64	Spadafora 1190 #20-21 H1
16,359.5	91.00	148.68	8,763.0	-6,372.7	5,255.8	0.00	0.00	0.00	0.00	Spadafora 1190 #20-21 H1

Cathedral Energy Services

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Company:	Gunnison Energy Corporation	TVD Reference:	KB=15' @ 8083.5usft
Project:	Gunnison County, CO	MD Reference:	KB=15' @ 8083.5usft
Site:	Spadafora (S20-T11S-R90W)	North Reference:	True
Well:	Spadafora 1190 #20-21 H1	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	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	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	KOP @ 1,100'
1,200.0	2.00	85.23	1,200.0	0.1	1.7	1.0	2.00	2.00	
1,300.0	4.00	85.23	1,299.8	0.6	7.0	4.0	2.00	2.00	
1,400.0	6.00	85.23	1,399.5	1.3	15.6	8.9	2.00	2.00	
1,500.0	8.00	85.23	1,498.7	2.3	27.8	15.9	2.00	2.00	
1,594.7	9.89	85.23	1,592.2	3.5	42.5	24.3	2.00	2.00	EOB @ 9.89° INC
1,600.0	9.89	85.23	1,597.5	3.6	43.4	24.8	0.02	0.02	
1,700.0	9.89	85.23	1,696.0	5.0	60.5	34.6	0.00	0.00	
1,800.0	9.89	85.23	1,794.5	6.5	77.6	44.4	0.00	0.00	
1,900.0	9.89	85.23	1,893.0	7.9	94.7	54.2	0.00	0.00	
2,000.0	9.89	85.23	1,991.5	9.3	111.9	64.0	0.00	0.00	
2,100.0	9.89	85.23	2,090.0	10.8	129.0	73.8	0.00	0.00	
2,200.0	9.89	85.23	2,188.5	12.2	146.1	83.6	0.00	0.00	
2,300.0	9.89	85.23	2,287.1	13.6	163.2	93.4	0.00	0.00	
2,400.0	9.89	85.23	2,385.6	15.0	180.4	103.2	0.00	0.00	
2,500.0	9.89	85.23	2,484.1	16.5	197.5	112.9	0.00	0.00	
2,600.0	9.89	85.23	2,582.6	17.9	214.6	122.7	0.00	0.00	
2,700.0	9.89	85.23	2,681.1	19.3	231.7	132.5	0.00	0.00	
2,800.0	9.89	85.23	2,779.6	20.8	248.9	142.3	0.00	0.00	
2,900.0	9.89	85.23	2,878.1	22.2	266.0	152.1	0.00	0.00	
3,000.0	9.89	85.23	2,976.6	23.6	283.1	161.9	0.00	0.00	
3,100.0	9.89	85.23	3,075.2	25.0	300.2	171.7	0.00	0.00	
3,200.0	9.89	85.23	3,173.7	26.5	317.4	181.5	0.00	0.00	
3,300.0	9.89	85.23	3,272.2	27.9	334.5	191.3	0.00	0.00	
3,400.0	9.89	85.23	3,370.7	29.3	351.6	201.1	0.00	0.00	
3,500.0	9.89	85.23	3,469.2	30.8	368.7	210.9	0.00	0.00	
3,600.0	9.89	85.23	3,567.7	32.2	385.9	220.7	0.00	0.00	
3,700.0	9.89	85.23	3,666.2	33.6	403.0	230.5	0.00	0.00	
3,800.0	9.89	85.23	3,764.7	35.0	420.1	240.3	0.00	0.00	
3,900.0	9.89	85.23	3,863.3	36.5	437.2	250.1	0.00	0.00	
4,000.0	9.89	85.23	3,961.8	37.9	454.4	259.8	0.00	0.00	
4,100.0	9.89	85.23	4,060.3	39.3	471.5	269.6	0.00	0.00	
4,200.0	9.89	85.23	4,158.8	40.8	488.6	279.4	0.00	0.00	
4,300.0	9.89	85.23	4,257.3	42.2	505.7	289.2	0.00	0.00	
4,400.0	9.89	85.23	4,355.8	43.6	522.9	299.0	0.00	0.00	
4,500.0	9.89	85.23	4,454.3	45.0	540.0	308.8	0.00	0.00	
4,600.0	9.89	85.23	4,552.8	46.5	557.1	318.6	0.00	0.00	
4,700.0	9.89	85.23	4,651.4	47.9	574.2	328.4	0.00	0.00	
4,800.0	9.89	85.23	4,749.9	49.3	591.4	338.2	0.00	0.00	
4,900.0	9.89	85.23	4,848.4	50.8	608.5	348.0	0.00	0.00	
5,000.0	9.89	85.23	4,946.9	52.2	625.6	357.8	0.00	0.00	

Cathedral Energy Services

Planning Report

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Company:	Gunnison Energy Corporation	TVD Reference:	KB=15' @ 8083.5usft
Project:	Gunnison County, CO	MD Reference:	KB=15' @ 8083.5usft
Site:	Spadafora (S20-T11S-R90W)	North Reference:	True
Well:	Spadafora 1190 #20-21 H1	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
5,100.0	9.89	85.23	5,045.4	53.6	642.7	367.6	0.00	0.00	
5,200.0	9.89	85.23	5,143.9	55.0	659.9	377.4	0.00	0.00	
5,300.0	9.89	85.23	5,242.4	56.5	677.0	387.2	0.00	0.00	
5,400.0	9.89	85.23	5,340.9	57.9	694.1	397.0	0.00	0.00	
5,500.0	9.89	85.23	5,439.5	59.3	711.2	406.8	0.00	0.00	
5,600.0	9.89	85.23	5,538.0	60.8	728.4	416.5	0.00	0.00	
5,700.0	9.89	85.23	5,636.5	62.2	745.5	426.3	0.00	0.00	
5,800.0	9.89	85.23	5,735.0	63.6	762.6	436.1	0.00	0.00	
5,900.0	9.89	85.23	5,833.5	65.0	779.7	445.9	0.00	0.00	
6,000.0	9.89	85.23	5,932.0	66.5	796.9	455.7	0.00	0.00	
6,100.0	9.89	85.23	6,030.5	67.9	814.0	465.5	0.00	0.00	
6,200.0	9.89	85.23	6,129.0	69.3	831.1	475.3	0.00	0.00	
6,300.0	9.89	85.23	6,227.6	70.8	848.2	485.1	0.00	0.00	
6,400.0	9.89	85.23	6,326.1	72.2	865.4	494.9	0.00	0.00	
6,500.0	9.89	85.23	6,424.6	73.6	882.5	504.7	0.00	0.00	
6,600.0	9.89	85.23	6,523.1	75.0	899.6	514.5	0.00	0.00	
6,700.0	9.89	85.23	6,621.6	76.5	916.7	524.3	0.00	0.00	
6,800.0	9.89	85.23	6,720.1	77.9	933.9	534.1	0.00	0.00	
6,900.0	9.89	85.23	6,818.6	79.3	951.0	543.9	0.00	0.00	
7,000.0	9.89	85.23	6,917.1	80.8	968.1	553.7	0.00	0.00	
7,100.0	9.89	85.23	7,015.7	82.2	985.2	563.5	0.00	0.00	
7,200.0	9.89	85.23	7,114.2	83.6	1,002.4	573.2	0.00	0.00	
7,300.0	9.89	85.23	7,212.7	85.0	1,019.5	583.0	0.00	0.00	
7,400.0	9.89	85.23	7,311.2	86.5	1,036.6	592.8	0.00	0.00	
7,500.0	9.89	85.23	7,409.7	87.9	1,053.7	602.6	0.00	0.00	
7,600.0	9.89	85.23	7,508.2	89.3	1,070.8	612.4	0.00	0.00	
7,700.0	9.89	85.23	7,606.7	90.8	1,088.0	622.2	0.00	0.00	
7,800.0	9.89	85.23	7,705.2	92.2	1,105.1	632.0	0.00	0.00	
7,900.0	9.89	85.23	7,803.8	93.6	1,122.2	641.8	0.00	0.00	
8,000.0	9.89	85.23	7,902.3	95.1	1,139.3	651.6	0.00	0.00	
8,100.0	9.89	85.23	8,000.8	96.5	1,156.5	661.4	0.00	0.00	
8,200.0	9.89	85.23	8,099.3	97.9	1,173.6	671.2	0.00	0.00	
8,300.0	9.89	85.23	8,197.8	99.3	1,190.7	681.0	0.00	0.00	
8,408.5	9.89	85.23	8,304.7	100.9	1,209.3	691.6	0.00	0.00	Start 9° Build/Turn
8,450.0	12.03	101.52	8,345.4	100.3	1,217.1	697.0	9.01	5.14	
8,500.0	15.42	114.11	8,394.0	96.6	1,228.3	707.0	9.00	6.78	
8,550.0	19.26	122.04	8,441.7	89.5	1,241.3	720.8	9.00	7.68	
8,600.0	23.33	127.34	8,488.3	79.1	1,256.2	738.3	9.00	8.14	
8,650.0	27.53	131.13	8,533.5	65.5	1,272.8	759.3	9.00	8.40	
8,700.0	31.80	133.97	8,576.9	48.7	1,291.0	783.8	9.00	8.55	
8,750.0	36.13	136.20	8,618.4	28.9	1,310.7	811.6	9.00	8.65	
8,800.0	40.48	138.01	8,657.6	6.2	1,331.7	842.5	9.00	8.72	
8,850.0	44.87	139.52	8,694.4	-19.3	1,354.1	876.4	9.00	8.76	
8,900.0	49.27	140.82	8,728.4	-47.4	1,377.5	913.0	9.00	8.80	
8,950.0	53.68	141.95	8,759.5	-78.0	1,401.9	952.1	9.00	8.82	
9,000.0	58.10	142.96	8,787.6	-110.8	1,427.1	993.5	9.00	8.84	
9,050.0	62.53	143.88	8,812.3	-145.7	1,453.0	1,036.8	9.00	8.86	
9,100.0	66.96	144.73	8,833.7	-182.4	1,479.3	1,081.9	9.00	8.87	
9,150.0	71.40	145.52	8,851.4	-220.7	1,506.1	1,128.5	9.00	8.88	
9,200.0	75.84	146.27	8,865.5	-260.4	1,532.9	1,176.3	9.00	8.88	
9,250.0	80.29	147.00	8,875.9	-301.3	1,559.8	1,224.9	9.00	8.89	
9,300.0	84.73	147.70	8,882.4	-343.0	1,586.6	1,274.1	9.00	8.89	

Cathedral Energy Services

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Wellbore:	HZ		
Design:	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
9,350.0	89.18	148.40	8,885.0	-385.4	1,613.0	1,323.6	9.00	8.89	
9,370.5	91.00	148.68	8,885.0	-402.8	1,623.7	1,343.9	9.00	8.89	LP @ 8,885' TVD, 91° INC
9,400.0	91.00	148.68	8,884.5	-428.0	1,639.0	1,373.1	0.00	0.00	
9,500.0	91.00	148.68	8,882.7	-513.5	1,691.0	1,472.0	0.00	0.00	
9,600.0	91.00	148.68	8,881.0	-598.9	1,743.0	1,571.0	0.00	0.00	
9,700.0	91.00	148.68	8,879.2	-684.3	1,794.9	1,670.0	0.00	0.00	
9,800.0	91.00	148.68	8,877.5	-769.7	1,846.9	1,768.9	0.00	0.00	
9,900.0	91.00	148.68	8,875.8	-855.1	1,898.9	1,867.9	0.00	0.00	
10,000.0	91.00	148.68	8,874.0	-940.5	1,950.8	1,966.8	0.00	0.00	
10,100.0	91.00	148.68	8,872.3	-1,026.0	2,002.8	2,065.8	0.00	0.00	
10,200.0	91.00	148.68	8,870.5	-1,111.4	2,054.8	2,164.8	0.00	0.00	
10,300.0	91.00	148.68	8,868.8	-1,196.8	2,106.7	2,263.7	0.00	0.00	
10,400.0	91.00	148.68	8,867.0	-1,282.2	2,158.7	2,362.7	0.00	0.00	
10,500.0	91.00	148.68	8,865.3	-1,367.6	2,210.7	2,461.7	0.00	0.00	
10,600.0	91.00	148.68	8,863.5	-1,453.1	2,262.6	2,560.6	0.00	0.00	
10,700.0	91.00	148.68	8,861.8	-1,538.5	2,314.6	2,659.6	0.00	0.00	
10,800.0	91.00	148.68	8,860.0	-1,623.9	2,366.6	2,758.5	0.00	0.00	
10,900.0	91.00	148.68	8,858.3	-1,709.3	2,418.5	2,857.5	0.00	0.00	
11,000.0	91.00	148.68	8,856.6	-1,794.7	2,470.5	2,956.5	0.00	0.00	
11,100.0	91.00	148.68	8,854.8	-1,880.1	2,522.5	3,055.4	0.00	0.00	
11,200.0	91.00	148.68	8,853.1	-1,965.6	2,574.5	3,154.4	0.00	0.00	
11,300.0	91.00	148.68	8,851.3	-2,051.0	2,626.4	3,253.4	0.00	0.00	
11,400.0	91.00	148.68	8,849.6	-2,136.4	2,678.4	3,352.3	0.00	0.00	
11,500.0	91.00	148.68	8,847.8	-2,221.8	2,730.4	3,451.3	0.00	0.00	
11,600.0	91.00	148.68	8,846.1	-2,307.2	2,782.3	3,550.3	0.00	0.00	
11,700.0	91.00	148.68	8,844.3	-2,392.6	2,834.3	3,649.2	0.00	0.00	
11,800.0	91.00	148.68	8,842.6	-2,478.1	2,886.3	3,748.2	0.00	0.00	
11,900.0	91.00	148.68	8,840.8	-2,563.5	2,938.2	3,847.1	0.00	0.00	
12,000.0	91.00	148.68	8,839.1	-2,648.9	2,990.2	3,946.1	0.00	0.00	
12,100.0	91.00	148.68	8,837.4	-2,734.3	3,042.2	4,045.1	0.00	0.00	
12,200.0	91.00	148.68	8,835.6	-2,819.7	3,094.1	4,144.0	0.00	0.00	
12,300.0	91.00	148.68	8,833.9	-2,905.2	3,146.1	4,243.0	0.00	0.00	
12,400.0	91.00	148.68	8,832.1	-2,990.6	3,198.1	4,342.0	0.00	0.00	
12,500.0	91.00	148.68	8,830.4	-3,076.0	3,250.1	4,440.9	0.00	0.00	
12,600.0	91.00	148.68	8,828.6	-3,161.4	3,302.0	4,539.9	0.00	0.00	
12,700.0	91.00	148.68	8,826.9	-3,246.8	3,354.0	4,638.9	0.00	0.00	
12,800.0	91.00	148.68	8,825.1	-3,332.2	3,406.0	4,737.8	0.00	0.00	
12,900.0	91.00	148.68	8,823.4	-3,417.7	3,457.9	4,836.8	0.00	0.00	
13,000.0	91.00	148.68	8,821.6	-3,503.1	3,509.9	4,935.7	0.00	0.00	
13,100.0	91.00	148.68	8,819.9	-3,588.5	3,561.9	5,034.7	0.00	0.00	
13,200.0	91.00	148.68	8,818.2	-3,673.9	3,613.8	5,133.7	0.00	0.00	
13,300.0	91.00	148.68	8,816.4	-3,759.3	3,665.8	5,232.6	0.00	0.00	
13,400.0	91.00	148.68	8,814.7	-3,844.7	3,717.8	5,331.6	0.00	0.00	
13,500.0	91.00	148.68	8,812.9	-3,930.2	3,769.7	5,430.6	0.00	0.00	
13,600.0	91.00	148.68	8,811.2	-4,015.6	3,821.7	5,529.5	0.00	0.00	
13,700.0	91.00	148.68	8,809.4	-4,101.0	3,873.7	5,628.5	0.00	0.00	
13,800.0	91.00	148.68	8,807.7	-4,186.4	3,925.6	5,727.4	0.00	0.00	
13,900.0	91.00	148.68	8,805.9	-4,271.8	3,977.6	5,826.4	0.00	0.00	
14,000.0	91.00	148.68	8,804.2	-4,357.3	4,029.6	5,925.4	0.00	0.00	
14,100.0	91.00	148.68	8,802.4	-4,442.7	4,081.6	6,024.3	0.00	0.00	
14,200.0	91.00	148.68	8,800.7	-4,528.1	4,133.5	6,123.3	0.00	0.00	
14,300.0	91.00	148.68	8,799.0	-4,613.5	4,185.5	6,222.3	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Spadafora 1190 #20-21 H1
Company:	Gunnison Energy Corporation	TVD Reference:	KB=15' @ 8083.5usft
Project:	Gunnison County, CO	MD Reference:	KB=15' @ 8083.5usft
Site:	Spadafora (S20-T11S-R90W)	North Reference:	True
Well:	Spadafora 1190 #20-21 H1	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100u)	Comments / Formations
14,400.0	91.00	148.68	8,797.2	-4,698.9	4,237.5	6,321.2	0.00	0.00	
14,500.0	91.00	148.68	8,795.5	-4,784.3	4,289.4	6,420.2	0.00	0.00	
14,600.0	91.00	148.68	8,793.7	-4,869.8	4,341.4	6,519.2	0.00	0.00	
14,700.0	91.00	148.68	8,792.0	-4,955.2	4,393.4	6,618.1	0.00	0.00	
14,800.0	91.00	148.68	8,790.2	-5,040.6	4,445.3	6,717.1	0.00	0.00	
14,900.0	91.00	148.68	8,788.5	-5,126.0	4,497.3	6,816.0	0.00	0.00	
15,000.0	91.00	148.68	8,786.7	-5,211.4	4,549.3	6,915.0	0.00	0.00	
15,100.0	91.00	148.68	8,785.0	-5,296.8	4,601.2	7,014.0	0.00	0.00	
15,200.0	91.00	148.68	8,783.2	-5,382.3	4,653.2	7,112.9	0.00	0.00	
15,300.0	91.00	148.68	8,781.5	-5,467.7	4,705.2	7,211.9	0.00	0.00	
15,400.0	91.00	148.68	8,779.7	-5,553.1	4,757.2	7,310.9	0.00	0.00	
15,500.0	91.00	148.68	8,778.0	-5,638.5	4,809.1	7,409.8	0.00	0.00	
15,600.0	91.00	148.68	8,776.3	-5,723.9	4,861.1	7,508.8	0.00	0.00	
15,700.0	91.00	148.68	8,774.5	-5,809.4	4,913.1	7,607.8	0.00	0.00	
15,800.0	91.00	148.68	8,772.8	-5,894.8	4,965.0	7,706.7	0.00	0.00	
15,900.0	91.00	148.68	8,771.0	-5,980.2	5,017.0	7,805.7	0.00	0.00	
16,000.0	91.00	148.68	8,769.3	-6,065.6	5,069.0	7,904.6	0.00	0.00	
16,100.0	91.00	148.68	8,767.5	-6,151.0	5,120.9	8,003.6	0.00	0.00	
16,200.0	91.00	148.68	8,765.8	-6,236.4	5,172.9	8,102.6	0.00	0.00	
16,300.0	91.00	148.68	8,764.0	-6,321.9	5,224.9	8,201.5	0.00	0.00	
16,359.5	91.00	148.68	8,763.0	-6,372.7	5,255.8	8,260.4	0.00	0.00	TD @ 16,359.5' MD

Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Spadafora 1190 #20-21 - hit/miss target - Shape - Point	0.00	0.00	8,763.0	-6,372.7	5,255.8	881,958.19	1,445,623.87	39.072708	-107.452350
Spadafora 1190 #20-21 - plan hits target center - Point	0.00	0.00	8,885.0	-402.8	1,623.7	888,003.33	1,442,118.52	39.089097	-107.465139
Spadafora 1190 #20 H1 - plan misses target center by 365.6usft at 9369.6usft MD (8885.0 TVD, -402.1 N, 1623.2 E) - Point	0.00	0.00	9,250.6	-402.5	1,623.7	888,003.69	1,442,118.52	39.089098	-107.465139
Spadafora 1190 #20 H1 - plan misses target center by 365.5usft at 16353.4usft MD (8763.1 TVD, -6367.5 N, 5252.6 E) - Point	0.00	0.00	9,128.6	-6,373.0	5,255.8	881,957.82	1,445,623.86	39.072707	-107.452350

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,100.0	1,100.0	0.0	0.0	KOP @ 1,100'
1,594.7	1,592.2	3.5	42.5	EOB @ 9.89° INC
8,408.5	8,304.7	100.9	1,209.3	Start 9° Build/Turn
9,370.5	8,885.0	-402.8	1,623.7	LP @ 8,885' TVD, 91° INC
16,359.5	8,763.0	-6,372.7	5,255.8	TD @ 16,359.5' MD

Gunnison Energy Corporation

Gunnison County, CO

Spadafora (S20-T11S-R90W)

Spadafora 1190 #20-21 H1

HZ

Plan: Plan #2

Standard Planning Report - Geographic

02 October, 2014

Cathedral Energy Services

Planning Report - Geographic

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Spadafora 1190 #20-21 H1
Company:	Gunnison Energy Corporation	TVD Reference:	KB=15' @ 8083.5usft
Project:	Gunnison County, CO	MD Reference:	KB=15' @ 8083.5usft
Site:	Spadafora (S20-T11S-R90W)	North Reference:	True
Well:	Spadafora 1190 #20-21 H1	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

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

Site		Spadafora (S20-T11S-R90W)			
Site Position:		Northing:	888,521.89 usft	Latitude:	39.090428
From:	Lat/Long	Easting:	1,440,528.85 usft	Longitude:	-107.470776
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-1.21 °

Well	Spadafora 1190 #20-21 H1					
Well Position	+N/-S	0.0 usft	Northing:	888,440.33 usft	Latitude:	39.090203
	+E/-W	0.0 usft	Easting:	1,440,503.70 usft	Longitude:	-107.470858
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	8,068.5 usft

Wellbore	HZ				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/12/2014	9.65	65.41	51,752

Design	Plan #2				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	0.0	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.0	0.0	0.0	140.49	

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,594.7	9.89	85.23	1,592.3	3.5	42.5	2.00	2.00	0.00	85.23	
8,408.5	9.89	85.23	8,304.6	100.9	1,209.3	0.00	0.00	0.00	0.00	
9,370.5	91.00	148.68	8,885.0	-402.8	1,623.7	9.00	8.43	6.60	63.64	Spadafora 1190 #20-2
16,359.5	91.00	148.68	8,763.0	-6,372.7	5,255.8	0.00	0.00	0.00	0.00	Spadafora 1190 #20-2

Cathedral Energy Services

Planning Report - Geographic

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Spadafora 1190 #20-21 H1
Company:	Gunnison Energy Corporation	TVD Reference:	KB=15' @ 8083.5usft
Project:	Gunnison County, CO	MD Reference:	KB=15' @ 8083.5usft
Site:	Spadafora (S20-T11S-R90W)	North Reference:	True
Well:	Spadafora 1190 #20-21 H1	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.0	0.00	0.00	0.0	0.0	0.0	888,440.33	1,440,503.70	39.090203	-107.470858
100.0	0.00	0.00	100.0	0.0	0.0	888,440.33	1,440,503.70	39.090203	-107.470858
200.0	0.00	0.00	200.0	0.0	0.0	888,440.33	1,440,503.70	39.090203	-107.470858
300.0	0.00	0.00	300.0	0.0	0.0	888,440.33	1,440,503.70	39.090203	-107.470858
400.0	0.00	0.00	400.0	0.0	0.0	888,440.33	1,440,503.70	39.090203	-107.470858
500.0	0.00	0.00	500.0	0.0	0.0	888,440.33	1,440,503.70	39.090203	-107.470858
600.0	0.00	0.00	600.0	0.0	0.0	888,440.33	1,440,503.70	39.090203	-107.470858
700.0	0.00	0.00	700.0	0.0	0.0	888,440.33	1,440,503.70	39.090203	-107.470858
800.0	0.00	0.00	800.0	0.0	0.0	888,440.33	1,440,503.70	39.090203	-107.470858
900.0	0.00	0.00	900.0	0.0	0.0	888,440.33	1,440,503.70	39.090203	-107.470858
1,000.0	0.00	0.00	1,000.0	0.0	0.0	888,440.33	1,440,503.70	39.090203	-107.470858
1,100.0	0.00	0.00	1,100.0	0.0	0.0	888,440.33	1,440,503.70	39.090203	-107.470858
KOP @ 1,100'									
1,200.0	2.00	85.23	1,200.0	0.1	1.7	888,440.44	1,440,505.44	39.090203	-107.470852
1,300.0	4.00	85.23	1,299.8	0.6	7.0	888,440.76	1,440,510.66	39.090205	-107.470834
1,400.0	6.00	85.23	1,399.5	1.3	15.6	888,441.30	1,440,519.36	39.090207	-107.470803
1,500.0	8.00	85.23	1,498.7	2.3	27.8	888,442.06	1,440,531.52	39.090209	-107.470760
1,594.7	9.89	85.23	1,592.2	3.5	42.5	888,442.97	1,440,546.22	39.090213	-107.470709
EOB @ 9.89° INC									
1,600.0	9.89	85.23	1,597.5	3.6	43.4	888,443.03	1,440,547.13	39.090213	-107.470706
1,700.0	9.89	85.23	1,696.0	5.0	60.5	888,444.10	1,440,564.28	39.090217	-107.470645
1,800.0	9.89	85.23	1,794.5	6.5	77.6	888,445.17	1,440,581.43	39.090221	-107.470585
1,900.0	9.89	85.23	1,893.0	7.9	94.7	888,446.23	1,440,598.58	39.090225	-107.470525
2,000.0	9.89	85.23	1,991.5	9.3	111.9	888,447.30	1,440,615.74	39.090229	-107.470464
2,100.0	9.89	85.23	2,090.0	10.8	129.0	888,448.37	1,440,632.89	39.090233	-107.470404
2,200.0	9.89	85.23	2,188.5	12.2	146.1	888,449.43	1,440,650.04	39.090236	-107.470344
2,300.0	9.89	85.23	2,287.1	13.6	163.2	888,450.50	1,440,667.19	39.090240	-107.470283
2,400.0	9.89	85.23	2,385.6	15.0	180.4	888,451.57	1,440,684.34	39.090244	-107.470223
2,500.0	9.89	85.23	2,484.1	16.5	197.5	888,452.63	1,440,701.49	39.090248	-107.470163
2,600.0	9.89	85.23	2,582.6	17.9	214.6	888,453.70	1,440,718.64	39.090252	-107.470102
2,700.0	9.89	85.23	2,681.1	19.3	231.7	888,454.77	1,440,735.79	39.090256	-107.470042
2,800.0	9.89	85.23	2,779.6	20.8	248.9	888,455.84	1,440,752.94	39.090260	-107.469982
2,900.0	9.89	85.23	2,878.1	22.2	266.0	888,456.90	1,440,770.09	39.090264	-107.469921
3,000.0	9.89	85.23	2,976.6	23.6	283.1	888,457.97	1,440,787.25	39.090268	-107.469861
3,100.0	9.89	85.23	3,075.2	25.0	300.2	888,459.04	1,440,804.40	39.090272	-107.469801
3,200.0	9.89	85.23	3,173.7	26.5	317.4	888,460.10	1,440,821.55	39.090276	-107.469740
3,300.0	9.89	85.23	3,272.2	27.9	334.5	888,461.17	1,440,838.70	39.090280	-107.469680
3,400.0	9.89	85.23	3,370.7	29.3	351.6	888,462.24	1,440,855.85	39.090284	-107.469620
3,500.0	9.89	85.23	3,469.2	30.8	368.7	888,463.30	1,440,873.00	39.090287	-107.469559
3,600.0	9.89	85.23	3,567.7	32.2	385.9	888,464.37	1,440,890.15	39.090291	-107.469499
3,700.0	9.89	85.23	3,666.2	33.6	403.0	888,465.44	1,440,907.30	39.090295	-107.469439
3,800.0	9.89	85.23	3,764.7	35.0	420.1	888,466.51	1,440,924.45	39.090299	-107.469379
3,900.0	9.89	85.23	3,863.3	36.5	437.2	888,467.57	1,440,941.61	39.090303	-107.469318
4,000.0	9.89	85.23	3,961.8	37.9	454.4	888,468.64	1,440,958.76	39.090307	-107.469258
4,100.0	9.89	85.23	4,060.3	39.3	471.5	888,469.71	1,440,975.91	39.090311	-107.469198
4,200.0	9.89	85.23	4,158.8	40.8	488.6	888,470.77	1,440,993.06	39.090315	-107.469137
4,300.0	9.89	85.23	4,257.3	42.2	505.7	888,471.84	1,441,010.21	39.090319	-107.469077
4,400.0	9.89	85.23	4,355.8	43.6	522.9	888,472.91	1,441,027.36	39.090323	-107.469017
4,500.0	9.89	85.23	4,454.3	45.0	540.0	888,473.97	1,441,044.51	39.090327	-107.468956
4,600.0	9.89	85.23	4,552.8	46.5	557.1	888,475.04	1,441,061.66	39.090331	-107.468896
4,700.0	9.89	85.23	4,651.4	47.9	574.2	888,476.11	1,441,078.81	39.090335	-107.468836
4,800.0	9.89	85.23	4,749.9	49.3	591.4	888,477.18	1,441,095.96	39.090338	-107.468775
4,900.0	9.89	85.23	4,848.4	50.8	608.5	888,478.24	1,441,113.12	39.090342	-107.468715
5,000.0	9.89	85.23	4,946.9	52.2	625.6	888,479.31	1,441,130.27	39.090346	-107.468655

Cathedral Energy Services

Planning Report - Geographic

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Spadafora 1190 #20-21 H1
Company:	Gunnison Energy Corporation	TVD Reference:	KB=15' @ 8083.5usft
Project:	Gunnison County, CO	MD Reference:	KB=15' @ 8083.5usft
Site:	Spadafora (S20-T11S-R90W)	North Reference:	True
Well:	Spadafora 1190 #20-21 H1	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
5,100.0	9.89	85.23	5,045.4	53.6	642.7	888,480.38	1,441,147.42	39.090350	-107.468594	
5,200.0	9.89	85.23	5,143.9	55.0	659.9	888,481.44	1,441,164.57	39.090354	-107.468534	
5,300.0	9.89	85.23	5,242.4	56.5	677.0	888,482.51	1,441,181.72	39.090358	-107.468474	
5,400.0	9.89	85.23	5,340.9	57.9	694.1	888,483.58	1,441,198.87	39.090362	-107.468413	
5,500.0	9.89	85.23	5,439.5	59.3	711.2	888,484.65	1,441,216.02	39.090366	-107.468353	
5,600.0	9.89	85.23	5,538.0	60.8	728.4	888,485.71	1,441,233.17	39.090370	-107.468293	
5,700.0	9.89	85.23	5,636.5	62.2	745.5	888,486.78	1,441,250.32	39.090374	-107.468232	
5,800.0	9.89	85.23	5,735.0	63.6	762.6	888,487.85	1,441,267.47	39.090378	-107.468172	
5,900.0	9.89	85.23	5,833.5	65.0	779.7	888,488.91	1,441,284.63	39.090382	-107.468112	
6,000.0	9.89	85.23	5,932.0	66.5	796.9	888,489.98	1,441,301.78	39.090385	-107.468052	
6,100.0	9.89	85.23	6,030.5	67.9	814.0	888,491.05	1,441,318.93	39.090389	-107.467991	
6,200.0	9.89	85.23	6,129.0	69.3	831.1	888,492.11	1,441,336.08	39.090393	-107.467931	
6,300.0	9.89	85.23	6,227.6	70.8	848.2	888,493.18	1,441,353.23	39.090397	-107.467871	
6,400.0	9.89	85.23	6,326.1	72.2	865.4	888,494.25	1,441,370.38	39.090401	-107.467810	
6,500.0	9.89	85.23	6,424.6	73.6	882.5	888,495.32	1,441,387.53	39.090405	-107.467750	
6,600.0	9.89	85.23	6,523.1	75.0	899.6	888,496.38	1,441,404.68	39.090409	-107.467690	
6,700.0	9.89	85.23	6,621.6	76.5	916.7	888,497.45	1,441,421.83	39.090413	-107.467629	
6,800.0	9.89	85.23	6,720.1	77.9	933.9	888,498.52	1,441,438.99	39.090417	-107.467569	
6,900.0	9.89	85.23	6,818.6	79.3	951.0	888,499.58	1,441,456.14	39.090421	-107.467509	
7,000.0	9.89	85.23	6,917.1	80.8	968.1	888,500.65	1,441,473.29	39.090425	-107.467448	
7,100.0	9.89	85.23	7,015.7	82.2	985.2	888,501.72	1,441,490.44	39.090429	-107.467388	
7,200.0	9.89	85.23	7,114.2	83.6	1,002.4	888,502.78	1,441,507.59	39.090433	-107.467328	
7,300.0	9.89	85.23	7,212.7	85.0	1,019.5	888,503.85	1,441,524.74	39.090436	-107.467267	
7,400.0	9.89	85.23	7,311.2	86.5	1,036.6	888,504.92	1,441,541.89	39.090440	-107.467207	
7,500.0	9.89	85.23	7,409.7	87.9	1,053.7	888,505.99	1,441,559.04	39.090444	-107.467147	
7,600.0	9.89	85.23	7,508.2	89.3	1,070.8	888,507.05	1,441,576.19	39.090448	-107.467086	
7,700.0	9.89	85.23	7,606.7	90.8	1,088.0	888,508.12	1,441,593.34	39.090452	-107.467026	
7,800.0	9.89	85.23	7,705.2	92.2	1,105.1	888,509.19	1,441,610.50	39.090456	-107.466966	
7,900.0	9.89	85.23	7,803.8	93.6	1,122.2	888,510.25	1,441,627.65	39.090460	-107.466905	
8,000.0	9.89	85.23	7,902.3	95.1	1,139.3	888,511.32	1,441,644.80	39.090464	-107.466845	
8,100.0	9.89	85.23	8,000.8	96.5	1,156.5	888,512.39	1,441,661.95	39.090468	-107.466785	
8,200.0	9.89	85.23	8,099.3	97.9	1,173.6	888,513.45	1,441,679.10	39.090472	-107.466724	
8,300.0	9.89	85.23	8,197.8	99.3	1,190.7	888,514.52	1,441,696.25	39.090476	-107.466664	
8,408.5	9.89	85.23	8,304.7	100.9	1,209.3	888,515.68	1,441,714.86	39.090480	-107.466599	
Start 9° Build/Turn										
8,450.0	12.03	101.52	8,345.4	100.3	1,217.1	888,514.95	1,441,722.64	39.090478	-107.466571	
8,500.0	15.42	114.11	8,394.0	96.6	1,228.3	888,510.96	1,441,733.73	39.090468	-107.466532	
8,550.0	19.26	122.04	8,441.7	89.5	1,241.3	888,503.59	1,441,746.64	39.090449	-107.466486	
8,600.0	23.33	127.34	8,488.3	79.1	1,256.2	888,492.89	1,441,761.29	39.090420	-107.466434	
8,650.0	27.53	131.13	8,533.5	65.5	1,272.8	888,478.94	1,441,777.58	39.090383	-107.466375	
8,700.0	31.80	133.97	8,576.9	48.7	1,291.0	888,461.80	1,441,795.41	39.090337	-107.466311	
8,750.0	36.13	136.20	8,618.4	28.9	1,310.7	888,441.59	1,441,814.68	39.090282	-107.466242	
8,800.0	40.48	138.01	8,657.6	6.2	1,331.7	888,418.44	1,441,835.27	39.090220	-107.466167	
8,850.0	44.87	139.52	8,694.4	-19.3	1,354.1	888,392.48	1,441,857.05	39.090150	-107.466089	
8,900.0	49.27	140.82	8,728.4	-47.4	1,377.5	888,363.88	1,441,879.88	39.090073	-107.466006	
8,950.0	53.68	141.95	8,759.5	-78.0	1,401.9	888,332.81	1,441,903.63	39.089989	-107.465920	
9,000.0	58.10	142.96	8,787.6	-110.8	1,427.1	888,299.47	1,441,928.14	39.089899	-107.465832	
9,050.0	62.53	143.88	8,812.3	-145.7	1,453.0	888,264.06	1,441,953.27	39.089803	-107.465741	
9,100.0	66.96	144.73	8,833.7	-182.4	1,479.3	888,226.79	1,441,978.87	39.089702	-107.465648	
9,150.0	71.40	145.52	8,851.4	-220.7	1,506.1	888,187.90	1,442,004.76	39.089597	-107.465554	
9,200.0	75.84	146.27	8,865.5	-260.4	1,532.9	888,147.63	1,442,030.81	39.089488	-107.465459	
9,250.0	80.29	147.00	8,875.9	-301.3	1,559.8	888,106.22	1,442,056.83	39.089376	-107.465364	
9,300.0	84.73	147.70	8,882.4	-343.0	1,586.6	888,063.94	1,442,082.68	39.089261	-107.465270	
9,350.0	89.18	148.40	8,885.0	-385.4	1,613.0	888,021.03	1,442,108.19	39.089145	-107.465177	

Cathedral Energy Services

Planning Report - Geographic

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Spadafora 1190 #20-21 H1
Company:	Gunnison Energy Corporation	TVD Reference:	KB=15' @ 8083.5usft
Project:	Gunnison County, CO	MD Reference:	KB=15' @ 8083.5usft
Site:	Spadafora (S20-T11S-R90W)	North Reference:	True
Well:	Spadafora 1190 #20-21 H1	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,370.5	91.00	148.68	8,885.0	-402.8	1,623.7	888,003.32	1,442,118.52	39.089097	-107.465139
LP @ 8,885' TVD, 91° INC									
9,400.0	91.00	148.68	8,884.5	-428.0	1,639.0	887,977.81	1,442,133.32	39.089028	-107.465085
9,500.0	91.00	148.68	8,882.7	-513.5	1,691.0	887,891.31	1,442,183.47	39.088793	-107.464902
9,600.0	91.00	148.68	8,881.0	-598.9	1,743.0	887,804.82	1,442,233.63	39.088559	-107.464719
9,700.0	91.00	148.68	8,879.2	-684.3	1,794.9	887,718.32	1,442,283.78	39.088324	-107.464536
9,800.0	91.00	148.68	8,877.5	-769.7	1,846.9	887,631.83	1,442,333.94	39.088090	-107.464353
9,900.0	91.00	148.68	8,875.8	-855.1	1,898.9	887,545.33	1,442,384.09	39.087855	-107.464170
10,000.0	91.00	148.68	8,874.0	-940.5	1,950.8	887,458.84	1,442,434.25	39.087621	-107.463987
10,100.0	91.00	148.68	8,872.3	-1,026.0	2,002.8	887,372.34	1,442,484.40	39.087386	-107.463804
10,200.0	91.00	148.68	8,870.5	-1,111.4	2,054.8	887,285.85	1,442,534.56	39.087152	-107.463621
10,300.0	91.00	148.68	8,868.8	-1,196.8	2,106.7	887,199.35	1,442,584.71	39.086918	-107.463438
10,400.0	91.00	148.68	8,867.0	-1,282.2	2,158.7	887,112.86	1,442,634.87	39.086683	-107.463255
10,500.0	91.00	148.68	8,865.3	-1,367.6	2,210.7	887,026.36	1,442,685.03	39.086449	-107.463072
10,600.0	91.00	148.68	8,863.5	-1,453.1	2,262.6	886,939.87	1,442,735.18	39.086214	-107.462889
10,700.0	91.00	148.68	8,861.8	-1,538.5	2,314.6	886,853.37	1,442,785.34	39.085980	-107.462706
10,800.0	91.00	148.68	8,860.0	-1,623.9	2,366.6	886,766.88	1,442,835.49	39.085745	-107.462523
10,900.0	91.00	148.68	8,858.3	-1,709.3	2,418.5	886,680.38	1,442,885.65	39.085511	-107.462340
11,000.0	91.00	148.68	8,856.6	-1,794.7	2,470.5	886,593.89	1,442,935.80	39.085276	-107.462157
11,100.0	91.00	148.68	8,854.8	-1,880.1	2,522.5	886,507.39	1,442,985.96	39.085042	-107.461974
11,200.0	91.00	148.68	8,853.1	-1,965.6	2,574.5	886,420.90	1,443,036.11	39.084807	-107.461791
11,300.0	91.00	148.68	8,851.3	-2,051.0	2,626.4	886,334.40	1,443,086.27	39.084573	-107.461608
11,400.0	91.00	148.68	8,849.6	-2,136.4	2,678.4	886,247.91	1,443,136.42	39.084338	-107.461425
11,500.0	91.00	148.68	8,847.8	-2,221.8	2,730.4	886,161.41	1,443,186.58	39.084104	-107.461242
11,600.0	91.00	148.68	8,846.1	-2,307.2	2,782.3	886,074.92	1,443,236.73	39.083869	-107.461059
11,700.0	91.00	148.68	8,844.3	-2,392.6	2,834.3	885,988.42	1,443,286.89	39.083635	-107.460876
11,800.0	91.00	148.68	8,842.6	-2,478.1	2,886.3	885,901.93	1,443,337.04	39.083400	-107.460693
11,900.0	91.00	148.68	8,840.8	-2,563.5	2,938.2	885,815.43	1,443,387.20	39.083166	-107.460510
12,000.0	91.00	148.68	8,839.1	-2,648.9	2,990.2	885,728.94	1,443,437.35	39.082931	-107.460327
12,100.0	91.00	148.68	8,837.4	-2,734.3	3,042.2	885,642.44	1,443,487.51	39.082697	-107.460144
12,200.0	91.00	148.68	8,835.6	-2,819.7	3,094.1	885,555.94	1,443,537.67	39.082462	-107.459961
12,300.0	91.00	148.68	8,833.9	-2,905.2	3,146.1	885,469.45	1,443,587.82	39.082228	-107.459778
12,400.0	91.00	148.68	8,832.1	-2,990.6	3,198.1	885,382.95	1,443,637.98	39.081993	-107.459595
12,500.0	91.00	148.68	8,830.4	-3,076.0	3,250.1	885,296.46	1,443,688.13	39.081759	-107.459412
12,600.0	91.00	148.68	8,828.6	-3,161.4	3,302.0	885,209.96	1,443,738.29	39.081524	-107.459229
12,700.0	91.00	148.68	8,826.9	-3,246.8	3,354.0	885,123.47	1,443,788.44	39.081290	-107.459046
12,800.0	91.00	148.68	8,825.1	-3,332.2	3,406.0	885,036.97	1,443,838.60	39.081055	-107.458863
12,900.0	91.00	148.68	8,823.4	-3,417.7	3,457.9	884,950.48	1,443,888.75	39.080821	-107.458680
13,000.0	91.00	148.68	8,821.6	-3,503.1	3,509.9	884,863.98	1,443,938.91	39.080586	-107.458497
13,100.0	91.00	148.68	8,819.9	-3,588.5	3,561.9	884,777.49	1,443,989.06	39.080352	-107.458314
13,200.0	91.00	148.68	8,818.2	-3,673.9	3,613.8	884,690.99	1,444,039.22	39.080117	-107.458131
13,300.0	91.00	148.68	8,816.4	-3,759.3	3,665.8	884,604.50	1,444,089.37	39.079883	-107.457948
13,400.0	91.00	148.68	8,814.7	-3,844.7	3,717.8	884,518.00	1,444,139.53	39.079648	-107.457765
13,500.0	91.00	148.68	8,812.9	-3,930.2	3,769.7	884,431.51	1,444,189.68	39.079414	-107.457582
13,600.0	91.00	148.68	8,811.2	-4,015.6	3,821.7	884,345.01	1,444,239.84	39.079179	-107.457399
13,700.0	91.00	148.68	8,809.4	-4,101.0	3,873.7	884,258.52	1,444,289.99	39.078945	-107.457216
13,800.0	91.00	148.68	8,807.7	-4,186.4	3,925.6	884,172.02	1,444,340.15	39.078710	-107.457033
13,900.0	91.00	148.68	8,805.9	-4,271.8	3,977.6	884,085.53	1,444,390.30	39.078476	-107.456850
14,000.0	91.00	148.68	8,804.2	-4,357.3	4,029.6	883,999.03	1,444,440.46	39.078241	-107.456667
14,100.0	91.00	148.68	8,802.4	-4,442.7	4,081.6	883,912.54	1,444,490.62	39.078007	-107.456484
14,200.0	91.00	148.68	8,800.7	-4,528.1	4,133.5	883,826.04	1,444,540.77	39.077772	-107.456301
14,300.0	91.00	148.68	8,799.0	-4,613.5	4,185.5	883,739.55	1,444,590.93	39.077538	-107.456118
14,400.0	91.00	148.68	8,797.2	-4,698.9	4,237.5	883,653.05	1,444,641.08	39.077303	-107.455935
14,500.0	91.00	148.68	8,795.5	-4,784.3	4,289.4	883,566.56	1,444,691.24	39.077069	-107.455752

Cathedral Energy Services

Planning Report - Geographic

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Spadafora 1190 #20-21 H1
Company:	Gunnison Energy Corporation	TVD Reference:	KB=15' @ 8083.5usft
Project:	Gunnison County, CO	MD Reference:	KB=15' @ 8083.5usft
Site:	Spadafora (S20-T11S-R90W)	North Reference:	True
Well:	Spadafora 1190 #20-21 H1	Survey Calculation Method:	Minimum Curvature
Wellbore:	HZ		
Design:	Plan #2		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
14,600.0	91.00	148.68	8,793.7	-4,869.8	4,341.4	883,480.06	1,444,741.39	39.076834	-107.455569	
14,700.0	91.00	148.68	8,792.0	-4,955.2	4,393.4	883,393.57	1,444,791.55	39.076600	-107.455386	
14,800.0	91.00	148.68	8,790.2	-5,040.6	4,445.3	883,307.07	1,444,841.70	39.076365	-107.455203	
14,900.0	91.00	148.68	8,788.5	-5,126.0	4,497.3	883,220.58	1,444,891.86	39.076131	-107.455020	
15,000.0	91.00	148.68	8,786.7	-5,211.4	4,549.3	883,134.08	1,444,942.01	39.075896	-107.454838	
15,100.0	91.00	148.68	8,785.0	-5,296.8	4,601.2	883,047.59	1,444,992.17	39.075662	-107.454655	
15,200.0	91.00	148.68	8,783.2	-5,382.3	4,653.2	882,961.09	1,445,042.32	39.075427	-107.454472	
15,300.0	91.00	148.68	8,781.5	-5,467.7	4,705.2	882,874.60	1,445,092.48	39.075193	-107.454289	
15,400.0	91.00	148.68	8,779.7	-5,553.1	4,757.2	882,788.10	1,445,142.63	39.074958	-107.454106	
15,500.0	91.00	148.68	8,778.0	-5,638.5	4,809.1	882,701.61	1,445,192.79	39.074724	-107.453923	
15,600.0	91.00	148.68	8,776.3	-5,723.9	4,861.1	882,615.11	1,445,242.94	39.074489	-107.453740	
15,700.0	91.00	148.68	8,774.5	-5,809.4	4,913.1	882,528.62	1,445,293.10	39.074255	-107.453557	
15,800.0	91.00	148.68	8,772.8	-5,894.8	4,965.0	882,442.12	1,445,343.26	39.074020	-107.453374	
15,900.0	91.00	148.68	8,771.0	-5,980.2	5,017.0	882,355.63	1,445,393.41	39.073786	-107.453191	
16,000.0	91.00	148.68	8,769.3	-6,065.6	5,069.0	882,269.13	1,445,443.57	39.073551	-107.453008	
16,100.0	91.00	148.68	8,767.5	-6,151.0	5,120.9	882,182.64	1,445,493.72	39.073317	-107.452825	
16,200.0	91.00	148.68	8,765.8	-6,236.4	5,172.9	882,096.14	1,445,543.88	39.073082	-107.452642	
16,300.0	91.00	148.68	8,764.0	-6,321.9	5,224.9	882,009.65	1,445,594.03	39.072848	-107.452459	
16,359.5	91.00	148.68	8,763.0	-6,372.7	5,255.8	881,958.19	1,445,623.87	39.072708	-107.452350	
TD @ 16,359.5' MD										

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										
Spadafora 1190 #20-21	0.00	0.00	8,763.0	-6,372.7	5,255.8	881,958.19	1,445,623.87	39.072708	-107.452350	
- plan hits target center										
- Point										
Spadafora 1190 #20-21	0.00	0.00	8,885.0	-402.8	1,623.7	888,003.33	1,442,118.52	39.089097	-107.465139	
- plan hits target center										
- Point										

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
1,100.0	1,100.0	0.0	0.0	KOP @ 1,100'	
1,594.7	1,592.2	3.5	42.5	EOB @ 9.89° INC	
8,408.5	8,304.7	100.9	1,209.3	Start 9° Build/Turn	
9,370.5	8,885.0	-402.8	1,623.7	LP @ 8,885' TVD, 91° INC	
16,359.5	8,763.0	-6,372.7	5,255.8	TD @ 16,359.5' MD	

Gunnison Energy Corporation

Gunnison County, CO

Spadafora (S20-T11S-R90W)

Spadafora 1190 #20-21 H1

HZ

Plan #2

Anticollision Report

02 October, 2014

Cathedral Energy Services

Anticollision Report

Company:	Gunnison Energy Corporation	Local Co-ordinate Reference:	Well Spadafora 1190 #20-21 H1
Project:	Gunnison County, CO	TVD Reference:	KB=15' @ 8083.5usft
Reference Site:	Spadafora (S20-T11S-R90W)	MD Reference:	KB=15' @ 8083.5usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Spadafora 1190 #20-21 H1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Reference	Plan #2		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.0usft	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,835.7usft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program	Date	10/2/2014		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.0	16,359.5	Plan #2 (HZ)	MWD	MWD

Summary						
Site Name	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Spadafora (S20-T11S-R90W)						
Spadafora 1190 #20-21 H2 - HZ - Plan #2	966.6	966.8	15.6	12.2	4.684	CC
Spadafora 1190 #20-21 H2 - HZ - Plan #2	1,000.0	1,000.0	15.6	12.1	4.526	ES
Spadafora 1190 #20-21 H2 - HZ - Plan #2	16,359.5	16,356.9	888.4	564.4	2.742	SF

Cathedral Energy Services

Anticollision Report

Company:	Gunnison Energy Corporation	Local Co-ordinate Reference:	Well Spadafora 1190 #20-21 H1
Project:	Gunnison County, CO	TVD Reference:	KB=15' @ 8083.5usft
Reference Site:	Spadafora (S20-T11S-R90W)	MD Reference:	KB=15' @ 8083.5usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Spadafora 1190 #20-21 H1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Spadafora (S20-T11S-R90W) - Spadafora 1190 #20-21 H2 - HZ - Plan #2													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Uncertainty Axis	Factor		
0.0	0.0	0.2	0.2	0.0	0.0	45.36	10.9	11.1	15.6					
100.0	100.0	100.2	100.2	0.1	0.1	45.36	10.9	11.1	15.6	15.3	0.30	52.383		
200.0	200.0	200.2	200.2	0.3	0.3	45.36	10.9	11.1	15.6	14.9	0.65	24.083		
300.0	300.0	300.2	300.2	0.5	0.5	45.36	10.9	11.1	15.6	14.6	1.00	15.636		
400.0	400.0	400.2	400.2	0.7	0.7	45.36	10.9	11.1	15.6	14.2	1.34	11.576		
500.0	500.0	500.2	500.2	0.8	0.8	45.36	10.9	11.1	15.6	13.9	1.69	9.189		
600.0	600.0	600.2	600.2	1.0	1.0	45.36	10.9	11.1	15.6	13.5	2.04	7.619		
700.0	700.0	700.2	700.2	1.2	1.2	45.36	10.9	11.1	15.6	13.2	2.39	6.507		
800.0	800.0	800.2	800.2	1.4	1.4	45.36	10.9	11.1	15.6	12.8	2.74	5.678		
900.0	900.0	900.2	900.2	1.5	1.5	45.36	10.9	11.1	15.6	12.5	3.09	5.037		
966.6	966.6	966.8	966.8	1.7	1.7	45.36	10.9	11.1	15.6	12.2	3.32	4.684 CC		
1,000.0	1,000.0	1,000.0	1,000.0	1.7	1.7	45.36	10.9	11.1	15.6	12.1	3.44	4.526 ES		
1,100.0	1,100.0	1,099.7	1,099.7	1.9	1.9	48.52	11.3	12.8	17.1	13.3	3.79	4.502		
1,200.0	1,200.0	1,199.1	1,198.9	2.1	2.1	-32.37	12.4	17.8	20.2	16.1	4.14	4.896		
1,300.0	1,299.8	1,298.3	1,297.8	2.3	2.3	-30.17	14.1	26.3	23.7	19.2	4.48	5.283		
1,400.0	1,399.5	1,397.4	1,396.2	2.4	2.5	-29.37	16.6	38.0	27.3	22.5	4.84	5.648		
1,500.0	1,498.7	1,496.4	1,493.9	2.7	2.7	-29.48	19.8	53.1	31.1	25.9	5.20	5.983		
1,600.0	1,597.5	1,595.3	1,591.0	2.9	3.0	-30.20	23.6	71.4	35.1	29.5	5.58	6.282		
1,700.0	1,696.0	1,693.9	1,687.2	3.2	3.4	-29.99	28.2	92.9	40.8	34.8	5.98	6.823		
1,800.0	1,794.5	1,792.2	1,782.1	3.5	3.8	-28.32	33.4	117.6	49.8	43.4	6.38	7.803		
1,900.0	1,893.0	1,891.6	1,877.9	3.8	4.2	-26.65	38.9	143.9	60.1	53.4	6.77	8.886		
2,000.0	1,991.5	1,991.1	1,973.6	4.1	4.7	-25.47	44.5	170.3	70.5	63.4	7.16	9.854		
2,100.0	2,090.0	2,090.5	2,069.3	4.4	5.1	-24.59	50.0	196.6	81.0	73.4	7.55	10.723		
2,200.0	2,188.5	2,190.0	2,165.1	4.7	5.6	-23.92	55.6	223.0	91.4	83.4	7.94	11.508		
2,300.0	2,287.1	2,289.4	2,260.8	5.0	6.1	-23.38	61.1	249.3	101.8	93.5	8.34	12.218		
2,400.0	2,385.6	2,388.9	2,356.5	5.3	6.6	-22.94	66.7	275.7	112.3	103.6	8.73	12.864		
2,500.0	2,484.1	2,488.3	2,452.3	5.7	7.0	-22.58	72.2	302.0	122.7	113.6	9.12	13.454		
2,600.0	2,582.6	2,587.8	2,548.0	6.0	7.5	-22.27	77.8	328.4	133.2	123.7	9.52	13.995		
2,700.0	2,681.1	2,687.2	2,643.7	6.3	8.0	-22.01	83.3	354.8	143.7	133.8	9.91	14.492		
2,800.0	2,779.6	2,786.7	2,739.5	6.7	8.5	-21.79	88.9	381.1	154.1	143.8	10.31	14.951		
2,900.0	2,878.1	2,886.1	2,835.2	7.0	9.0	-21.59	94.4	407.5	164.6	153.9	10.71	15.375		
3,000.0	2,976.6	2,985.6	2,930.9	7.3	9.5	-21.42	100.0	433.8	175.1	164.0	11.10	15.769		
3,100.0	3,075.2	3,085.0	3,026.7	7.7	10.0	-21.26	105.5	460.2	185.6	174.1	11.50	16.136		
3,200.0	3,173.7	3,184.5	3,122.4	8.0	10.5	-21.13	111.1	486.5	196.0	184.1	11.90	16.478		
3,300.0	3,272.2	3,283.9	3,218.1	8.4	11.0	-21.00	116.7	512.9	206.5	194.2	12.29	16.797		
3,400.0	3,370.7	3,383.4	3,313.8	8.7	11.6	-20.89	122.2	539.2	217.0	204.3	12.69	17.097		
3,500.0	3,469.2	3,482.8	3,409.6	9.0	12.1	-20.79	127.8	565.6	227.5	214.4	13.09	17.377		
3,600.0	3,567.7	3,582.3	3,505.3	9.4	12.6	-20.70	133.3	592.0	238.0	224.5	13.49	17.642		
3,700.0	3,666.2	3,681.7	3,601.0	9.7	13.1	-20.61	138.9	618.3	248.4	234.5	13.89	17.890		
3,800.0	3,764.7	3,781.2	3,696.8	10.1	13.6	-20.54	144.4	644.7	258.9	244.6	14.28	18.125		
3,900.0	3,863.3	3,880.6	3,792.5	10.4	14.1	-20.46	150.0	671.0	269.4	254.7	14.68	18.347		
4,000.0	3,961.8	3,980.1	3,888.2	10.8	14.6	-20.40	155.5	697.4	279.9	264.8	15.08	18.557		
4,100.0	4,060.3	4,079.5	3,984.0	11.1	15.1	-20.34	161.1	723.7	290.4	274.9	15.48	18.757		
4,200.0	4,158.8	4,179.0	4,079.7	11.5	15.6	-20.28	166.6	750.1	300.8	285.0	15.88	18.946		
4,300.0	4,257.3	4,278.4	4,175.4	11.8	16.1	-20.23	172.2	776.4	311.3	295.0	16.28	19.125		
4,400.0	4,355.8	4,377.9	4,271.2	12.1	16.7	-20.18	177.7	802.8	321.8	305.1	16.68	19.296		
4,500.0	4,454.3	4,477.3	4,366.9	12.5	17.2	-20.13	183.3	829.2	332.3	315.2	17.08	19.459		
4,600.0	4,552.8	4,576.8	4,462.6	12.8	17.7	-20.09	188.8	855.5	342.8	325.3	17.47	19.615		
4,700.0	4,651.4	4,676.2	4,558.4	13.2	18.2	-20.04	194.4	881.9	353.2	335.4	17.87	19.763		
4,800.0	4,749.9	4,775.7	4,654.1	13.5	18.7	-20.00	199.9	908.2	363.7	345.5	18.27	19.905		
4,900.0	4,848.4	4,875.1	4,749.8	13.9	19.2	-19.97	205.5	934.6	374.2	355.5	18.67	20.041		
5,000.0	4,946.9	4,974.6	4,845.6	14.2	19.7	-19.93	211.0	960.9	384.7	365.6	19.07	20.171		

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

Cathedral Energy Services

Anticollision Report

Company:	Gunnison Energy Corporation	Local Co-ordinate Reference:	Well Spadafora 1190 #20-21 H1
Project:	Gunnison County, CO	TVD Reference:	KB=15' @ 8083.5usft
Reference Site:	Spadafora (S20-T11S-R90W)	MD Reference:	KB=15' @ 8083.5usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Spadafora 1190 #20-21 H1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Spadafora (S20-T11S-R90W) - Spadafora 1190 #20-21 H2 - HZ - Plan #2													Offset Site Error:	0.0 usft
Survey Program: 0-MWD													Offset Well Error:	0.0 usft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
5,100.0	5,045.4	5,074.0	4,941.3	14.6	20.2	-19.90	216.6	987.3	395.2	375.7	19.47	20.295		
5,200.0	5,143.9	5,173.4	5,037.0	14.9	20.8	-19.87	222.1	1,013.6	405.7	385.8	19.87	20.415		
5,300.0	5,242.4	5,272.9	5,132.8	15.3	21.3	-19.84	227.7	1,040.0	416.1	395.9	20.27	20.530		
5,400.0	5,340.9	5,372.3	5,228.5	15.6	21.8	-19.81	233.2	1,066.4	426.6	406.0	20.67	20.640		
5,500.0	5,439.5	5,471.8	5,324.2	16.0	22.3	-19.78	238.8	1,092.7	437.1	416.0	21.07	20.746		
5,600.0	5,538.0	5,571.2	5,420.0	16.3	22.8	-19.76	244.4	1,119.1	447.6	426.1	21.47	20.848		
5,700.0	5,636.5	5,670.7	5,515.7	16.7	23.3	-19.73	249.9	1,145.4	458.1	436.2	21.87	20.947		
5,800.0	5,735.0	5,770.1	5,611.4	17.0	23.8	-19.71	255.5	1,171.8	468.6	446.3	22.27	21.042		
5,900.0	5,833.5	5,869.6	5,707.1	17.4	24.4	-19.69	261.0	1,198.1	479.0	456.4	22.67	21.133		
6,000.0	5,932.0	5,969.0	5,802.9	17.7	24.9	-19.67	266.6	1,224.5	489.5	466.5	23.07	21.221		
6,100.0	6,030.5	6,068.5	5,898.6	18.1	25.4	-19.65	272.1	1,250.8	500.0	476.5	23.47	21.306		
6,200.0	6,129.0	6,167.9	5,994.3	18.4	25.9	-19.63	277.7	1,277.2	510.5	486.6	23.87	21.389		
6,300.0	6,227.6	6,267.4	6,090.1	18.8	26.4	-19.61	283.2	1,303.6	521.0	496.7	24.27	21.468		
6,400.0	6,326.1	6,366.8	6,185.8	19.1	26.9	-19.59	288.8	1,329.9	531.5	506.8	24.67	21.545		
6,500.0	6,424.6	6,466.3	6,281.5	19.5	27.4	-19.57	294.3	1,356.3	541.9	516.9	25.07	21.620		
6,600.0	6,523.1	6,565.7	6,377.3	19.8	28.0	-19.56	299.9	1,382.6	552.4	527.0	25.47	21.692		
6,700.0	6,621.6	6,665.2	6,473.0	20.2	28.5	-19.54	305.4	1,409.0	562.9	537.0	25.87	21.762		
6,800.0	6,720.1	6,764.6	6,568.7	20.5	29.0	-19.53	311.0	1,435.3	573.4	547.1	26.27	21.830		
6,900.0	6,818.6	6,864.1	6,664.5	20.9	29.5	-19.51	316.5	1,461.7	583.9	557.2	26.67	21.895		
7,000.0	6,917.1	6,963.5	6,760.2	21.2	30.0	-19.50	322.1	1,488.0	594.4	567.3	27.07	21.959		
7,100.0	7,015.7	7,063.0	6,855.9	21.6	30.5	-19.48	327.6	1,514.4	604.8	577.4	27.47	22.021		
7,200.0	7,114.2	7,162.4	6,951.7	21.9	31.0	-19.47	333.2	1,540.8	615.3	587.5	27.87	22.081		
7,300.0	7,212.7	7,261.9	7,047.4	22.2	31.6	-19.46	338.7	1,567.1	625.8	597.6	28.27	22.139		
7,400.0	7,311.2	7,361.3	7,143.1	22.6	32.1	-19.44	344.3	1,593.5	636.3	607.6	28.67	22.196		
7,500.0	7,409.7	7,460.8	7,238.9	22.9	32.6	-19.43	349.8	1,619.8	646.8	617.7	29.07	22.251		
7,600.0	7,508.2	7,560.2	7,334.6	23.3	33.1	-19.42	355.4	1,646.2	657.3	627.8	29.47	22.305		
7,700.0	7,606.7	7,659.7	7,430.3	23.6	33.6	-19.41	361.0	1,672.5	667.8	637.9	29.87	22.357		
7,800.0	7,705.2	7,759.1	7,526.1	24.0	34.1	-19.40	366.5	1,698.9	678.2	648.0	30.27	22.408		
7,900.0	7,803.8	7,858.6	7,621.8	24.3	34.6	-19.39	372.1	1,725.2	688.7	658.1	30.67	22.457		
8,000.0	7,902.3	7,958.0	7,717.5	24.7	35.2	-19.38	377.6	1,751.6	699.2	668.1	31.07	22.506		
8,100.0	8,000.8	8,057.5	7,813.3	25.0	35.7	-19.37	383.2	1,778.0	709.7	678.2	31.47	22.553		
8,200.0	8,099.3	8,156.9	7,909.0	25.4	36.2	-19.36	388.7	1,804.3	720.2	688.3	31.87	22.598		
8,300.0	8,197.8	8,256.4	8,004.7	25.7	36.7	-19.35	394.3	1,830.7	730.7	698.4	32.27	22.643		
8,400.0	8,296.3	8,355.8	8,100.4	26.1	37.2	-19.34	399.8	1,857.0	741.1	708.5	32.67	22.687		
8,500.0	8,394.0	8,455.0	8,196.0	26.5	37.7	-47.28	405.4	1,883.3	750.8	717.8	33.06	22.710		
8,600.0	8,488.3	8,552.2	8,289.5	27.0	38.2	-60.67	410.8	1,909.1	758.9	724.7	34.15	22.218		
8,700.0	8,576.9	8,641.4	8,374.9	27.7	38.7	-68.05	412.5	1,934.6	766.5	730.7	35.80	21.408		
8,800.0	8,657.6	8,732.7	8,459.8	28.4	39.3	-72.88	403.4	1,966.8	774.7	736.9	37.87	20.456		
8,900.0	8,728.4	8,828.7	8,544.4	29.3	40.0	-76.53	381.9	2,006.6	783.6	743.2	40.35	19.419		
9,000.0	8,787.6	8,930.4	8,626.7	30.2	40.8	-79.52	346.5	2,054.4	792.8	749.7	43.17	18.365		
9,100.0	8,833.7	9,038.9	8,703.9	31.3	41.8	-82.11	295.2	2,110.6	802.2	755.9	46.24	17.348		
9,200.0	8,865.5	9,155.3	8,772.0	32.5	42.9	-84.39	226.5	2,174.9	811.2	761.7	49.44	16.406		
9,300.0	8,882.4	9,280.4	8,825.8	33.8	44.2	-86.39	139.3	2,246.3	819.2	766.5	52.68	15.550		
9,400.0	8,884.5	9,414.8	8,858.9	35.1	45.6	-88.16	34.1	2,322.6	825.5	769.5	56.01	14.738		
9,500.0	8,882.7	9,547.2	8,865.6	36.4	47.0	-88.79	-76.9	2,394.2	827.9	767.9	60.00	13.799		
9,600.0	8,881.0	9,647.2	8,863.8	37.9	48.2	-88.79	-161.9	2,446.9	828.8	765.3	63.48	13.055		
9,700.0	8,879.2	9,747.2	8,862.1	39.3	49.4	-88.79	-246.8	2,499.6	829.6	762.6	67.02	12.378		
9,800.0	8,877.5	9,847.2	8,860.4	40.8	50.6	-88.79	-331.8	2,552.3	830.5	759.9	70.61	11.762		
9,900.0	8,875.8	9,947.2	8,858.6	42.4	51.9	-88.80	-416.8	2,605.0	831.3	757.1	74.23	11.200		
10,000.0	8,874.0	10,047.2	8,856.9	44.0	53.2	-88.80	-501.7	2,657.7	832.2	754.3	77.88	10.686		
10,100.0	8,872.3	10,147.2	8,855.1	45.6	54.6	-88.80	-586.7	2,710.4	833.1	751.5	81.56	10.214		
10,200.0	8,870.5	10,247.2	8,853.4	47.2	56.0	-88.80	-671.7	2,763.1	833.9	748.7	85.27	9.780		

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

Cathedral Energy Services

Anticollision Report

Company:	Gunnison Energy Corporation	Local Co-ordinate Reference:	Well Spadafora 1190 #20-21 H1
Project:	Gunnison County, CO	TVD Reference:	KB=15' @ 8083.5usft
Reference Site:	Spadafora (S20-T11S-R90W)	MD Reference:	KB=15' @ 8083.5usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Spadafora 1190 #20-21 H1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design Spadafora (S20-T11S-R90W) - Spadafora 1190 #20-21 H2 - HZ - Plan #2													Offset Site Error: 0.0 usft	
Survey Program: O-MWD													Offset Well Error: 0.0 usft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor		
10,300.0	8,868.8	10,347.2	8,851.7	48.9	57.4	-88.80	-756.6	2,815.8	834.8	745.8	88.99	9.380		
10,400.0	8,867.0	10,447.1	8,849.9	50.6	58.9	-88.80	-841.6	2,868.5	835.7	742.9	92.74	9.011		
10,500.0	8,865.3	10,547.1	8,848.2	52.3	60.4	-88.81	-926.5	2,921.2	836.5	740.0	96.50	8.669		
10,600.0	8,863.5	10,647.1	8,846.4	54.0	61.9	-88.81	-1,011.5	2,973.9	837.4	737.1	100.28	8.351		
10,700.0	8,861.8	10,747.1	8,844.7	55.8	63.5	-88.81	-1,096.5	3,026.6	838.2	734.2	104.06	8.055		
10,800.0	8,860.0	10,847.1	8,842.9	57.5	65.1	-88.81	-1,181.4	3,079.3	839.1	731.2	107.87	7.779		
10,900.0	8,858.3	10,947.1	8,841.2	59.3	66.7	-88.81	-1,266.4	3,132.0	840.0	728.3	111.68	7.521		
11,000.0	8,856.6	11,047.1	8,839.5	61.1	68.3	-88.81	-1,351.4	3,184.7	840.8	725.3	115.50	7.280		
11,100.0	8,854.8	11,147.1	8,837.7	62.9	69.9	-88.81	-1,436.3	3,237.4	841.7	722.4	119.33	7.053		
11,200.0	8,853.1	11,247.1	8,836.0	64.7	71.6	-88.82	-1,521.3	3,290.1	842.5	719.4	123.17	6.841		
11,300.0	8,851.3	11,347.1	8,834.2	66.5	73.2	-88.82	-1,606.2	3,342.8	843.4	716.4	127.01	6.640		
11,400.0	8,849.6	11,447.1	8,832.5	68.4	74.9	-88.82	-1,691.2	3,395.5	844.3	713.4	130.86	6.452		
11,500.0	8,847.8	11,547.1	8,830.8	70.2	76.6	-88.82	-1,776.2	3,448.2	845.1	710.4	134.72	6.273		
11,600.0	8,846.1	11,647.1	8,829.0	72.0	78.3	-88.82	-1,861.1	3,500.9	846.0	707.4	138.58	6.105		
11,700.0	8,844.3	11,747.1	8,827.3	73.9	80.1	-88.82	-1,946.1	3,553.6	846.9	704.4	142.45	5.945		
11,800.0	8,842.6	11,847.1	8,825.5	75.8	81.8	-88.82	-2,031.1	3,606.3	847.7	701.4	146.32	5.793		
11,900.0	8,840.8	11,947.1	8,823.8	77.6	83.6	-88.83	-2,116.0	3,659.0	848.6	698.4	150.20	5.650		
12,000.0	8,839.1	12,047.1	8,822.0	79.5	85.3	-88.83	-2,201.0	3,711.8	849.4	695.4	154.08	5.513		
12,100.0	8,837.4	12,147.1	8,820.3	81.4	87.1	-88.83	-2,286.0	3,764.5	850.3	692.3	157.96	5.383		
12,200.0	8,835.6	12,247.1	8,818.6	83.2	88.9	-88.83	-2,370.9	3,817.2	851.2	689.3	161.85	5.259		
12,300.0	8,833.9	12,347.1	8,816.8	85.1	90.7	-88.83	-2,455.9	3,869.9	852.0	686.3	165.74	5.141		
12,400.0	8,832.1	12,447.1	8,815.1	87.0	92.4	-88.83	-2,540.8	3,922.6	852.9	683.3	169.64	5.028		
12,500.0	8,830.4	12,547.1	8,813.3	88.9	94.3	-88.83	-2,625.8	3,975.3	853.7	680.2	173.53	4.920		
12,600.0	8,828.6	12,647.1	8,811.6	90.8	96.1	-88.84	-2,710.8	4,028.0	854.6	677.2	177.43	4.817		
12,700.0	8,826.9	12,747.1	8,809.9	92.7	97.9	-88.84	-2,795.7	4,080.7	855.5	674.1	181.33	4.718		
12,800.0	8,825.1	12,847.1	8,808.1	94.6	99.7	-88.84	-2,880.7	4,133.4	856.3	671.1	185.24	4.623		
12,900.0	8,823.4	12,947.1	8,806.4	96.5	101.5	-88.84	-2,965.7	4,186.1	857.2	668.1	189.14	4.532		
13,000.0	8,821.6	13,047.1	8,804.6	98.4	103.4	-88.84	-3,050.6	4,238.8	858.1	665.0	193.05	4.445		
13,100.0	8,819.9	13,147.0	8,802.9	100.3	105.2	-88.84	-3,135.6	4,291.5	858.9	662.0	196.96	4.361		
13,200.0	8,818.2	13,247.0	8,801.2	102.2	107.0	-88.84	-3,220.6	4,344.2	859.8	658.9	200.87	4.280		
13,300.0	8,816.4	13,347.0	8,799.4	104.1	108.9	-88.85	-3,305.5	4,396.9	860.6	655.9	204.78	4.203		
13,400.0	8,814.7	13,447.0	8,797.7	106.1	110.8	-88.85	-3,390.5	4,449.6	861.5	652.8	208.70	4.128		
13,500.0	8,812.9	13,547.0	8,795.9	108.0	112.6	-88.85	-3,475.4	4,502.3	862.4	649.8	212.61	4.056		
13,600.0	8,811.2	13,647.0	8,794.2	109.9	114.5	-88.85	-3,560.4	4,555.0	863.2	646.7	216.53	3.987		
13,700.0	8,809.4	13,747.0	8,792.4	111.8	116.3	-88.85	-3,645.4	4,607.7	864.1	643.6	220.45	3.920		
13,800.0	8,807.7	13,847.0	8,790.7	113.7	118.2	-88.85	-3,730.3	4,660.4	864.9	640.6	224.37	3.855		
13,900.0	8,805.9	13,947.0	8,789.0	115.7	120.1	-88.85	-3,815.3	4,713.1	865.8	637.5	228.29	3.793		
14,000.0	8,804.2	14,047.0	8,787.2	117.6	122.0	-88.86	-3,900.3	4,765.8	866.7	634.5	232.21	3.732		
14,100.0	8,802.4	14,147.0	8,785.5	119.5	123.8	-88.86	-3,985.2	4,818.5	867.5	631.4	236.13	3.674		
14,200.0	8,800.7	14,247.0	8,783.7	121.5	125.7	-88.86	-4,070.2	4,871.2	868.4	628.3	240.06	3.617		
14,300.0	8,799.0	14,347.0	8,782.0	123.4	127.6	-88.86	-4,155.2	4,923.9	869.3	625.3	243.98	3.563		
14,400.0	8,797.2	14,447.0	8,780.3	125.3	129.5	-88.86	-4,240.1	4,976.6	870.1	622.2	247.91	3.510		
14,500.0	8,795.5	14,547.0	8,778.5	127.3	131.4	-88.86	-4,325.1	5,029.3	871.0	619.1	251.84	3.459		
14,600.0	8,793.7	14,647.0	8,776.8	129.2	133.3	-88.86	-4,410.0	5,082.0	871.8	616.1	255.76	3.409		
14,700.0	8,792.0	14,747.0	8,775.0	131.1	135.2	-88.87	-4,495.0	5,134.7	872.7	613.0	259.69	3.361		
14,800.0	8,790.2	14,847.0	8,773.3	133.1	137.1	-88.87	-4,580.0	5,187.4	873.6	609.9	263.62	3.314		
14,900.0	8,788.5	14,947.0	8,771.5	135.0	139.0	-88.87	-4,664.9	5,240.1	874.4	606.9	267.55	3.268		
15,000.0	8,786.7	15,047.0	8,769.8	136.9	140.9	-88.87	-4,749.9	5,292.8	875.3	603.8	271.48	3.224		
15,100.0	8,785.0	15,147.0	8,768.1	138.9	142.8	-88.87	-4,834.9	5,345.5	876.1	600.7	275.41	3.181		
15,200.0	8,783.2	15,247.0	8,766.3	140.8	144.7	-88.87	-4,919.8	5,398.2	877.0	597.7	279.35	3.140		
15,300.0	8,781.5	15,347.0	8,764.6	142.8	146.6	-88.87	-5,004.8	5,450.9	877.9	594.6	283.28	3.099		
15,400.0	8,779.7	15,447.0	8,762.8	144.7	148.5	-88.88	-5,089.8	5,503.6	878.7	591.5	287.21	3.060		

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

Cathedral Energy Services

Anticollision Report

Company:	Gunnison Energy Corporation	Local Co-ordinate Reference:	Well Spadafora 1190 #20-21 H1
Project:	Gunnison County, CO	TVD Reference:	KB=15' @ 8083.5usft
Reference Site:	Spadafora (S20-T11S-R90W)	MD Reference:	KB=15' @ 8083.5usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Spadafora 1190 #20-21 H1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Offset Design		Spadafora (S20-T11S-R90W) - Spadafora 1190 #20-21 H2 - HZ - Plan #2										Offset Site Error:		0.0 usft		
Survey Program:		0-MWD												Offset Well Error:		0.0 usft
Reference		Offset		Semi Major Axis			Distance							Warning		
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Total Uncertainty Axis	Separation Factor				
15,500.0	8,778.0	15,547.0	8,761.1	146.7	150.4	-88.88	-5,174.7	5,556.3	879.6	588.4	291.15	3.021				
15,600.0	8,776.3	15,647.0	8,759.4	148.6	152.4	-88.88	-5,259.7	5,609.0	880.5	585.4	295.08	2.984				
15,700.0	8,774.5	15,747.0	8,757.6	150.6	154.3	-88.88	-5,344.6	5,661.7	881.3	582.3	299.01	2.947				
15,800.0	8,772.8	15,846.9	8,755.9	152.5	156.2	-88.88	-5,429.6	5,714.4	882.2	579.2	302.95	2.912				
15,900.0	8,771.0	15,946.9	8,754.1	154.4	158.1	-88.88	-5,514.6	5,767.1	883.0	576.2	306.89	2.877				
16,000.0	8,769.3	16,046.9	8,752.4	156.4	160.0	-88.88	-5,599.5	5,819.8	883.9	573.1	310.82	2.844				
16,100.0	8,767.5	16,146.9	8,750.6	158.3	162.0	-88.88	-5,684.5	5,872.5	884.8	570.0	314.76	2.811				
16,200.0	8,765.8	16,246.9	8,748.9	160.3	163.9	-88.89	-5,769.5	5,925.2	885.6	566.9	318.70	2.779				
16,300.0	8,764.0	16,346.9	8,747.2	162.2	165.8	-88.89	-5,854.4	5,977.9	886.5	563.9	322.63	2.748				
16,359.5	8,763.0	16,356.9	8,747.0	163.4	166.0	-88.89	-5,862.9	5,983.1	888.4	564.4	324.00	2.742 SF				

Cathedral Energy Services

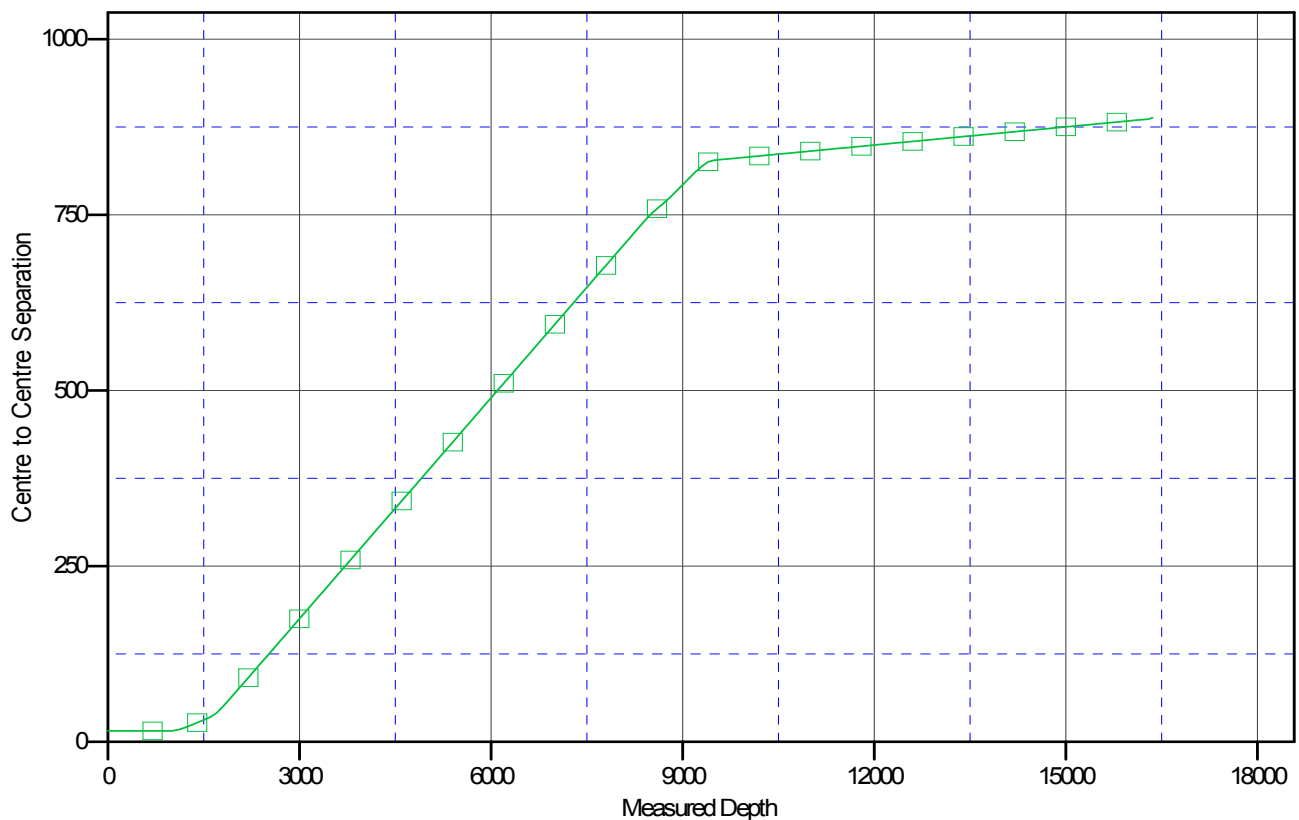
Anticollision Report

Company:	Gunnison Energy Corporation	Local Co-ordinate Reference:	Well Spadafora 1190 #20-21 H1
Project:	Gunnison County, CO	TVD Reference:	KB=15' @ 8083.5usft
Reference Site:	Spadafora (S20-T11S-R90W)	MD Reference:	KB=15' @ 8083.5usft
Site Error:	0.0usft	North Reference:	True
Reference Well:	Spadafora 1190 #20-21 H1	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0usft	Output errors are at	2.00 sigma
Reference Wellbore	HZ	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #2	Offset TVD Reference:	Offset Datum

Reference Depths are relative to KB=15' @ 8083.5usft
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Spadafora 1190 #20-21 H1
Coordinate System is US State Plane 1927 (Exact solution), Colorado South 503
Grid Convergence at Surface is: -1.21°

Ladder Plot



LEGEND

— Spadafora 1190 #20-21 H2, HZ, Plan #2 V0