

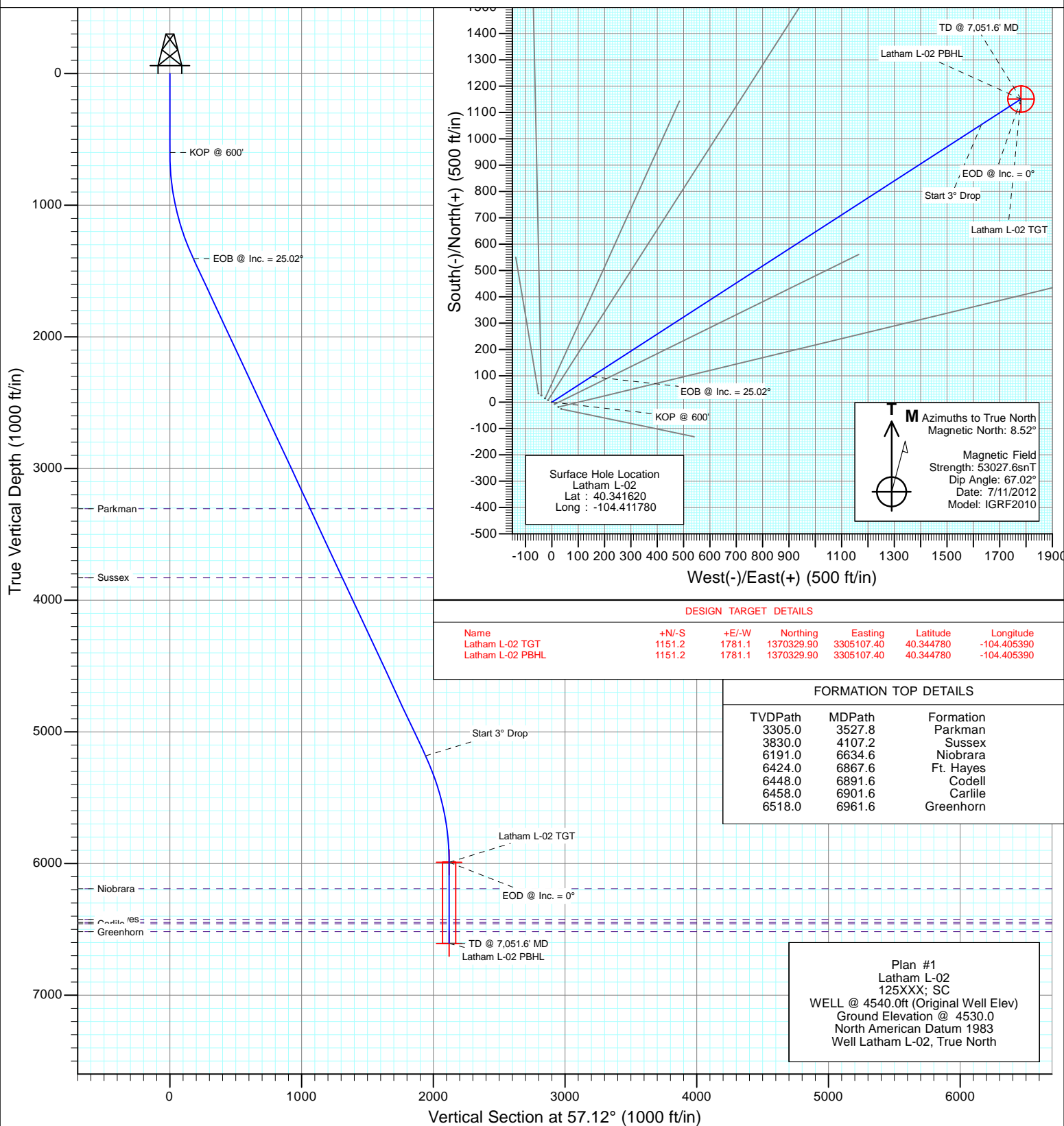


Project: Weld County
Site: Latham 12-02 Pad
Well: Latham L-02
Wellbore: OH
Design: Plan #1



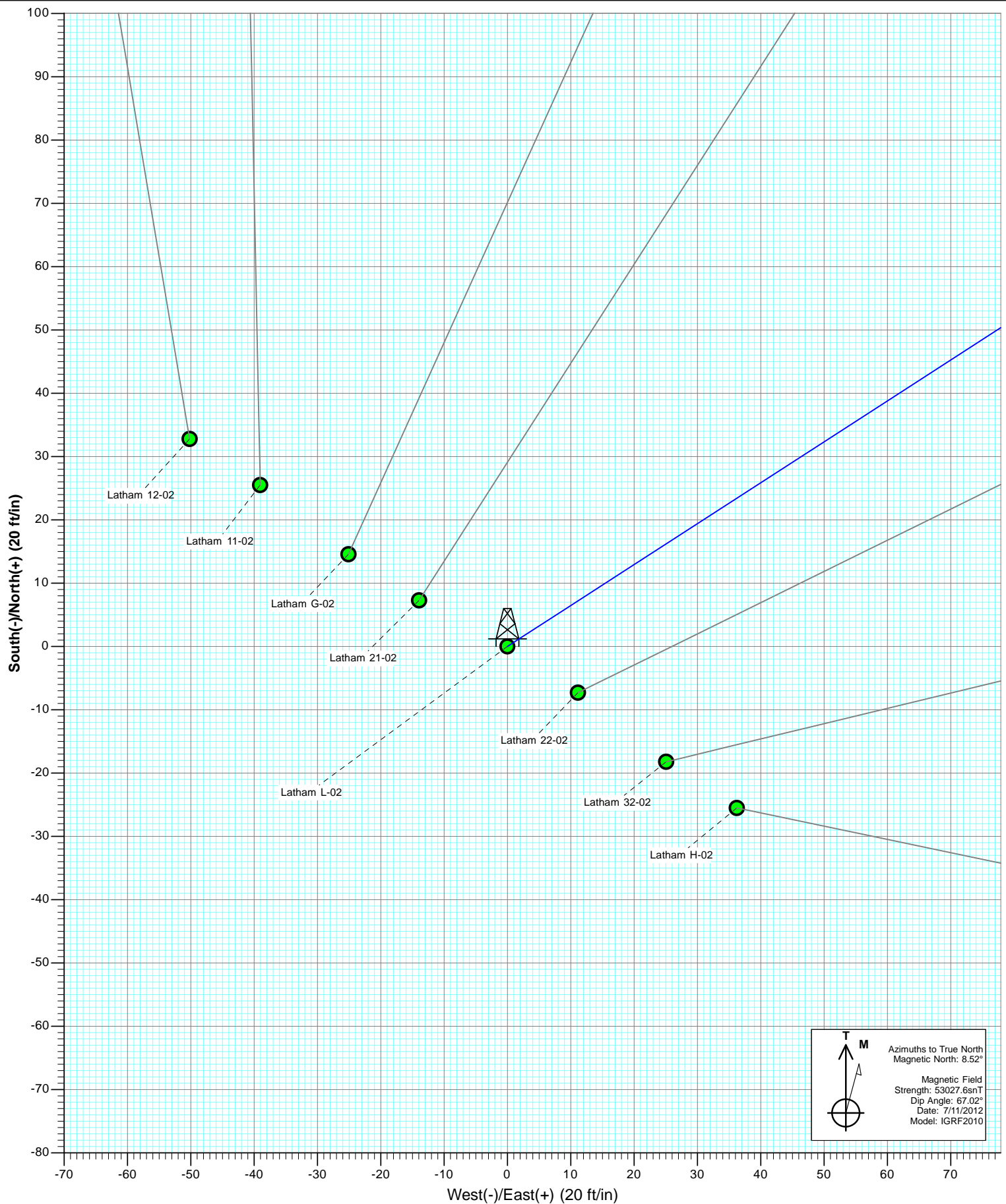
SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.0	
3	1434.1	25.02	57.12	1407.8	97.3	150.5	3.00	57.12	179.3	
4	5600.5	25.02	57.12	5183.2	1053.9	1630.6	0.00	0.00	1941.5	
5	6434.6	0.00	0.00	5991.0	1151.2	1781.1	3.00	180.00	2120.8	Latham L-02 TGT
6	7051.6	0.00	0.00	6608.0	1151.2	1781.1	0.00	0.00	2120.8	Latham L-02 PBHL



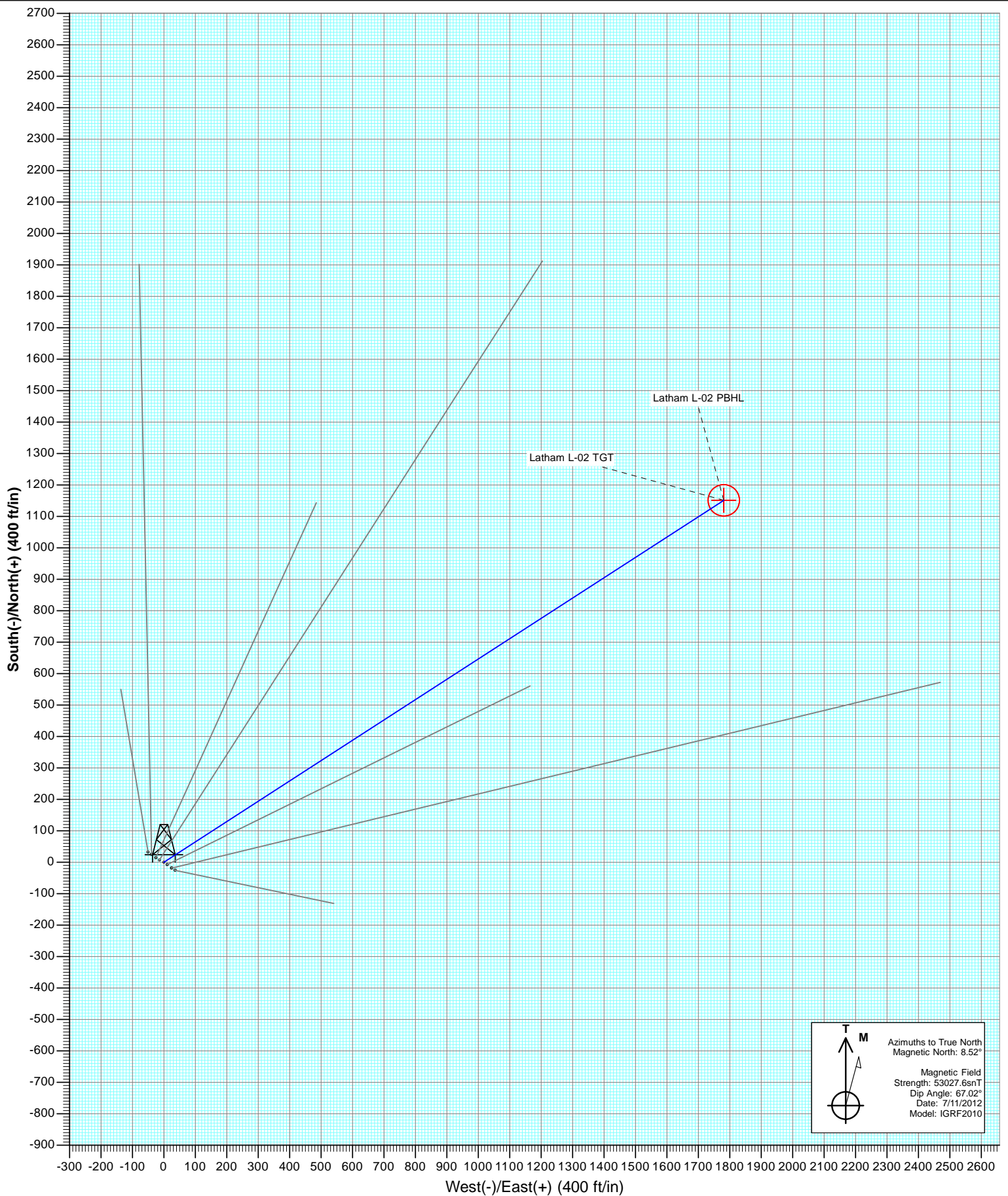


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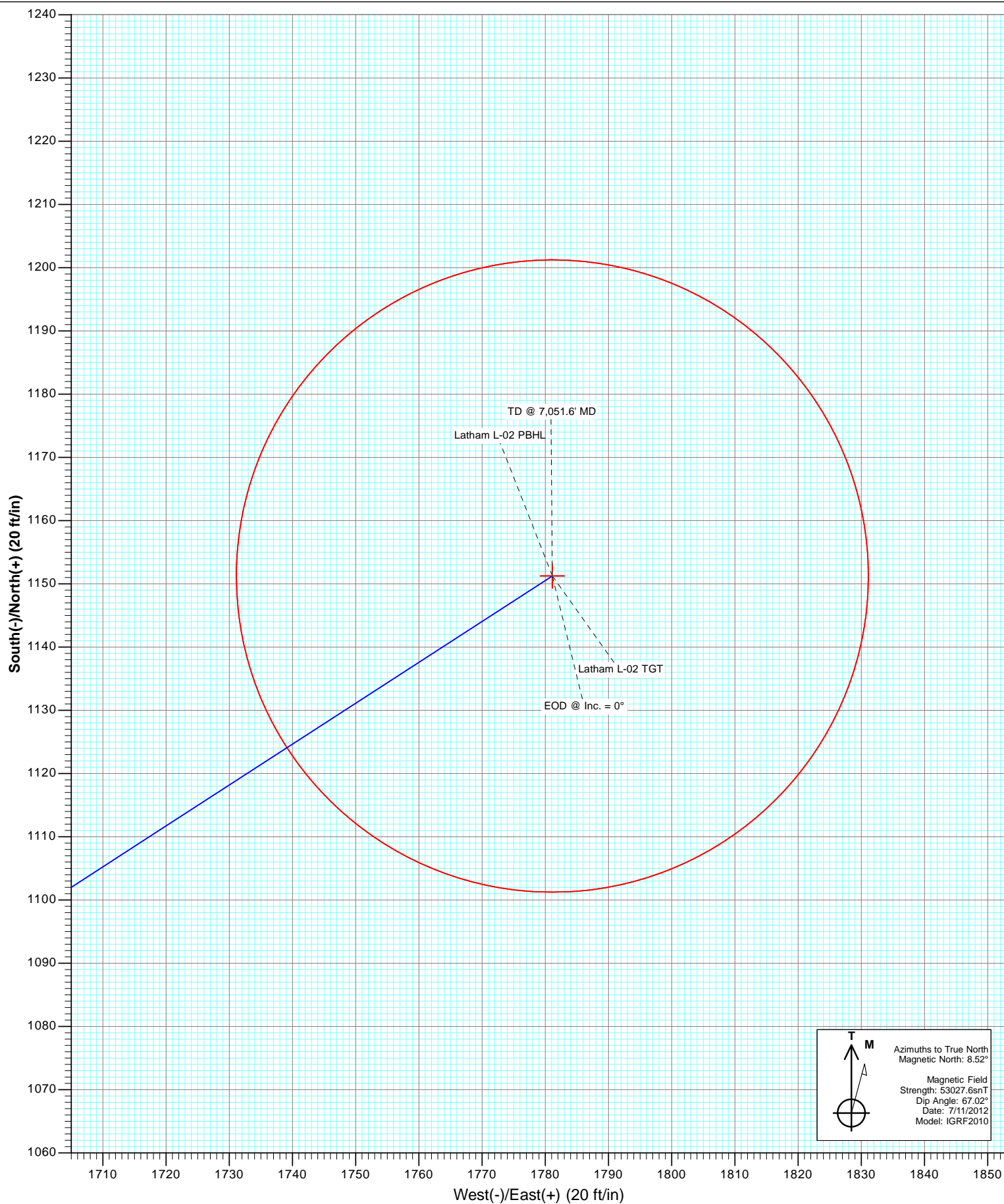


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Site: Latham 12-02 Pad
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Project: Weld County
Site: Latham 12-02 Pad
Well: Latham L-02
Wellbore: OH
Plan: Plan #1



Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Latham L-02
Company:	Bonanza Creek Energy Operating Company, LLC	TVD Reference:	WELL @ 4540.0ft (Original Well Elev)
Project:	Weld County	MD Reference:	WELL @ 4540.0ft (Original Well Elev)
Site:	Latham 12-02 Pad	North Reference:	True
Well:	Latham L-02	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Project	Weld County		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site		Latham 12-02 Pad			
Site Position:		Northing:	1,369,181.91 ft	Latitude:	40.341690
From:	Lat/Long	Easting:	3,303,301.19 ft	Longitude:	-104.411920
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.70 °

Well	Latham L-02					
Well Position	+N/-S	0.0 ft	Northing:	1,369,156.88 ft	Latitude:	40.341620
	+E/-W	0.0 ft	Easting:	3,303,340.53 ft	Longitude:	-104.411780
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,530.0 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
			(°)	(°)	(nT)
	IGRF2010	7/11/2012	8.52	67.02	53,028

Design	Plan #1				
Audit Notes:					
Version:	Phase:	PLAN		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	57.12	

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(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	
600.0	0.00	0.00	600.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,434.1	25.02	57.12	1,407.8	97.3	150.5	3.00	3.00	0.00	57.12	
5,600.5	25.02	57.12	5,183.2	1,053.9	1,630.6	0.00	0.00	0.00	0.00	
6,434.6	0.00	0.00	5,991.0	1,151.2	1,781.1	3.00	-3.00	0.00	180.00	Latham L-02 TGT
7,051.6	0.00	0.00	6,608.0	1,151.2	1,781.1	0.00	0.00	0.00	0.00	Latham L-02 PBHL

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Latham L-02
Company:	Bonanza Creek Energy Operating Company, LLC	TVD Reference:	WELL @ 4540.0ft (Original Well Elev)
Project:	Weld County	MD Reference:	WELL @ 4540.0ft (Original Well Elev)
Site:	Latham 12-02 Pad	North Reference:	True
Well:	Latham L-02	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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	KOP @ 600'
700.0	3.00	57.12	700.0	1.4	2.2	2.6	3.00	3.00	
800.0	6.00	57.12	799.6	5.7	8.8	10.5	3.00	3.00	
900.0	9.00	57.12	898.8	12.8	19.7	23.5	3.00	3.00	
1,000.0	12.00	57.12	997.1	22.7	35.1	41.7	3.00	3.00	
1,100.0	15.00	57.12	1,094.3	35.3	54.7	65.1	3.00	3.00	
1,200.0	18.00	57.12	1,190.2	50.7	78.5	93.5	3.00	3.00	
1,300.0	21.00	57.12	1,284.4	68.9	106.5	126.9	3.00	3.00	
1,400.0	24.00	57.12	1,376.8	89.6	138.7	165.1	3.00	3.00	
1,434.1	25.02	57.12	1,407.8	97.3	150.5	179.3	3.00	3.00	EOB @ Inc. = 25.02°
1,500.0	25.02	57.12	1,467.6	112.4	174.0	207.1	0.00	0.00	
1,600.0	25.02	57.12	1,558.2	135.4	209.5	249.4	0.00	0.00	
1,700.0	25.02	57.12	1,648.8	158.4	245.0	291.7	0.00	0.00	
1,800.0	25.02	57.12	1,739.4	181.3	280.5	334.0	0.00	0.00	
1,900.0	25.02	57.12	1,830.0	204.3	316.1	376.3	0.00	0.00	
2,000.0	25.02	57.12	1,920.6	227.2	351.6	418.6	0.00	0.00	
2,100.0	25.02	57.12	2,011.2	250.2	387.1	460.9	0.00	0.00	
2,200.0	25.02	57.12	2,101.8	273.2	422.6	503.2	0.00	0.00	
2,300.0	25.02	57.12	2,192.5	296.1	458.1	545.5	0.00	0.00	
2,400.0	25.02	57.12	2,283.1	319.1	493.7	587.8	0.00	0.00	
2,500.0	25.02	57.12	2,373.7	342.0	529.2	630.1	0.00	0.00	
2,600.0	25.02	57.12	2,464.3	365.0	564.7	672.4	0.00	0.00	
2,700.0	25.02	57.12	2,554.9	388.0	600.2	714.7	0.00	0.00	
2,800.0	25.02	57.12	2,645.5	410.9	635.8	757.0	0.00	0.00	
2,900.0	25.02	57.12	2,736.1	433.9	671.3	799.3	0.00	0.00	
3,000.0	25.02	57.12	2,826.8	456.8	706.8	841.6	0.00	0.00	
3,100.0	25.02	57.12	2,917.4	479.8	742.3	883.9	0.00	0.00	
3,200.0	25.02	57.12	3,008.0	502.8	777.9	926.2	0.00	0.00	
3,300.0	25.02	57.12	3,098.6	525.7	813.4	968.5	0.00	0.00	
3,400.0	25.02	57.12	3,189.2	548.7	848.9	1,010.8	0.00	0.00	
3,500.0	25.02	57.12	3,279.8	571.7	884.4	1,053.1	0.00	0.00	
3,527.8	25.02	57.12	3,305.0	578.0	894.3	1,064.8	0.00	0.00	Parkman
3,600.0	25.02	57.12	3,370.4	594.6	919.9	1,095.4	0.00	0.00	
3,700.0	25.02	57.12	3,461.1	617.6	955.5	1,137.7	0.00	0.00	
3,800.0	25.02	57.12	3,551.7	640.5	991.0	1,180.0	0.00	0.00	
3,900.0	25.02	57.12	3,642.3	663.5	1,026.5	1,222.3	0.00	0.00	
4,000.0	25.02	57.12	3,732.9	686.5	1,062.0	1,264.6	0.00	0.00	
4,100.0	25.02	57.12	3,823.5	709.4	1,097.6	1,306.9	0.00	0.00	
4,107.2	25.02	57.12	3,830.0	711.1	1,100.1	1,309.9	0.00	0.00	Sussex
4,200.0	25.02	57.12	3,914.1	732.4	1,133.1	1,349.2	0.00	0.00	
4,300.0	25.02	57.12	4,004.7	755.3	1,168.6	1,391.5	0.00	0.00	
4,400.0	25.02	57.12	4,095.4	778.3	1,204.1	1,433.8	0.00	0.00	
4,500.0	25.02	57.12	4,186.0	801.3	1,239.7	1,476.1	0.00	0.00	
4,600.0	25.02	57.12	4,276.6	824.2	1,275.2	1,518.4	0.00	0.00	
4,700.0	25.02	57.12	4,367.2	847.2	1,310.7	1,560.7	0.00	0.00	
4,800.0	25.02	57.12	4,457.8	870.1	1,346.2	1,603.0	0.00	0.00	

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Latham L-02
Company:	Bonanza Creek Energy Operating Company, LLC	TVD Reference:	WELL @ 4540.0ft (Original Well Elev)
Project:	Weld County	MD Reference:	WELL @ 4540.0ft (Original Well Elev)
Site:	Latham 12-02 Pad	North Reference:	True
Well:	Latham L-02	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

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
4,900.0	25.02	57.12	4,548.4	893.1	1,381.7	1,645.3	0.00	0.00	
5,000.0	25.02	57.12	4,639.0	916.1	1,417.3	1,687.6	0.00	0.00	
5,100.0	25.02	57.12	4,729.7	939.0	1,452.8	1,729.8	0.00	0.00	
5,200.0	25.02	57.12	4,820.3	962.0	1,488.3	1,772.1	0.00	0.00	
5,300.0	25.02	57.12	4,910.9	984.9	1,523.8	1,814.4	0.00	0.00	
5,400.0	25.02	57.12	5,001.5	1,007.9	1,559.4	1,856.7	0.00	0.00	
5,500.0	25.02	57.12	5,092.1	1,030.9	1,594.9	1,899.0	0.00	0.00	
5,600.5	25.02	57.12	5,183.2	1,053.9	1,630.6	1,941.5	0.00	0.00	Start 3° Drop
5,700.0	22.04	57.12	5,274.4	1,075.5	1,663.9	1,981.3	3.00	-3.00	
5,800.0	19.04	57.12	5,368.0	1,094.5	1,693.4	2,016.3	3.00	-3.00	
5,900.0	16.04	57.12	5,463.4	1,110.9	1,718.7	2,046.5	3.00	-3.00	
6,000.0	13.04	57.12	5,560.2	1,124.5	1,739.8	2,071.6	3.00	-3.00	
6,100.0	10.04	57.12	5,658.1	1,135.4	1,756.6	2,091.6	3.00	-3.00	
6,200.0	7.04	57.12	5,757.0	1,143.4	1,769.1	2,106.4	3.00	-3.00	
6,300.0	4.04	57.12	5,856.5	1,148.7	1,777.2	2,116.1	3.00	-3.00	
6,400.0	1.04	57.12	5,956.4	1,151.1	1,780.9	2,120.5	3.00	-3.00	
6,434.6	0.00	0.00	5,991.0	1,151.2	1,781.1	2,120.8	3.00	-3.00	EOD @ Inc. = 0°
6,500.0	0.00	0.00	6,056.4	1,151.2	1,781.1	2,120.8	0.00	0.00	
6,600.0	0.00	0.00	6,156.4	1,151.2	1,781.1	2,120.8	0.00	0.00	
6,634.6	0.00	0.00	6,191.0	1,151.2	1,781.1	2,120.8	0.00	0.00	Niobrara
6,700.0	0.00	0.00	6,256.4	1,151.2	1,781.1	2,120.8	0.00	0.00	
6,800.0	0.00	0.00	6,356.4	1,151.2	1,781.1	2,120.8	0.00	0.00	
6,867.6	0.00	0.00	6,424.0	1,151.2	1,781.1	2,120.8	0.00	0.00	Ft. Hayes
6,891.6	0.00	0.00	6,448.0	1,151.2	1,781.1	2,120.8	0.00	0.00	Codell
6,900.0	0.00	0.00	6,456.4	1,151.2	1,781.1	2,120.8	0.00	0.00	
6,901.6	0.00	0.00	6,458.0	1,151.2	1,781.1	2,120.8	0.00	0.00	Carlile
6,961.6	0.00	0.00	6,518.0	1,151.2	1,781.1	2,120.8	0.00	0.00	Greenhorn
7,000.0	0.00	0.00	6,556.4	1,151.2	1,781.1	2,120.8	0.00	0.00	
7,051.6	0.00	0.00	6,608.0	1,151.2	1,781.1	2,120.8	0.00	0.00	TD @ 7,051.6' MD

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									
Latham L-02 PBHL	0.00	0.00	6,608.0	1,151.2	1,781.1	1,370,329.90	3,305,107.40	40.344780	-104.405390
- plan hits target center									
- Circle (radius 50.0)									
Latham L-02 TGT	0.00	0.00	5,991.0	1,151.2	1,781.1	1,370,329.90	3,305,107.40	40.344780	-104.405390
- plan hits target center									
- Point									

Cathedral Energy Services

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well Latham L-02
Company:	Bonanza Creek Energy Operating Company, LLC	TVD Reference:	WELL @ 4540.0ft (Original Well Elev)
Project:	Weld County	MD Reference:	WELL @ 4540.0ft (Original Well Elev)
Site:	Latham 12-02 Pad	North Reference:	True
Well:	Latham L-02	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,527.8	3,305.0	Parkman				
4,107.2	3,830.0	Sussex				
6,634.6	6,191.0	Niobrara				
6,867.6	6,424.0	Ft. Hayes				
6,891.6	6,448.0	Codell				
6,901.6	6,458.0	Carlile				
6,961.6	6,518.0	Greenhorn				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
600.0	600.0	0.0	0.0	KOP @ 600'	
1,434.1	1,407.8	97.3	150.5	EOB @ Inc. = 25.02°	
5,600.5	5,183.2	1,053.9	1,630.6	Start 3° Drop	
6,434.6	5,991.0	1,151.2	1,781.1	EOD @ Inc. = 0°	
7,051.6	6,608.0	1,151.2	1,781.1	TD @ 7,051.6' MD	

Bonanza Creek Energy Operating Company, LLC

**Weld County
Latham 12-02 Pad
Latham L-02
OH
Plan #1**

Anticollision Report

11 July, 2012

Cathedral Energy Services

Anticollision Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Latham L-02
Project:	Weld County	TVD Reference:	WELL @ 4540.0ft (Original Well Elev)
Reference Site:	Latham 12-02 Pad	MD Reference:	WELL @ 4540.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Latham L-02	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference	Plan #1		
Filter type:	GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of reference		
Interpolation Method:	MD Interval 100.0ft	Error Model:	Systematic Ellipse
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 500.0ft	Error Surface:	Elliptical Conic
Warning Levels Evaluated at:	2.00 Sigma		

Survey Tool Program		Date	7/11/2012		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.0	7,051.6	Plan #1 (OH)	MWD	Geolink MWD	

Summary						
Site Name	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Offset Well - Wellbore - Design						
Latham 12-02 Pad						
Latham 11-02 - OH - Plan #1	0.0	0.0	46.6			
Latham 11-02 - OH - Plan #1	600.0	599.0	46.6	46.6	10,000.000	CC, ES
Latham 12-02 - OH - Plan #1	0.0	0.0	59.9			
Latham 12-02 - OH - Plan #1	600.0	599.0	59.9	59.9	10,000.000	CC, ES
Latham 21-02 - OH - Plan #1	0.0	0.0	15.8			
Latham 21-02 - OH - Plan #1	600.0	599.0	15.7	15.7	10,000.000	CC, ES
Latham 22-02 - OH - Plan #1	0.0	0.0	13.4			
Latham 22-02 - OH - Plan #1	600.0	599.0	13.3	13.3	10,000.000	CC, ES
Latham 32-02 - OH - Plan #1	0.0	0.0	31.0			
Latham 32-02 - OH - Plan #1	600.0	599.0	31.0	31.0	10,000.000	CC, ES
Latham G-02 - OH - Plan #1	0.0	0.0	29.0			
Latham G-02 - OH - Plan #1	600.0	599.0	29.0	29.0	10,000.000	CC, ES
Latham H-02 - OH - Plan #1	0.0	0.0	44.3			
Latham H-02 - OH - Plan #1	600.0	600.0	44.3	44.3	10,000.000	CC, ES

Cathedral Energy Services

Anticollision Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Latham L-02
Project:	Weld County	TVD Reference:	WELL @ 4540.0ft (Original Well Elev)
Reference Site:	Latham 12-02 Pad	MD Reference:	WELL @ 4540.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Latham L-02	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Latham 12-02 Pad - Latham 11-02 - OH - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance				Total	Separation	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-56.83	25.5	-39.0	46.6					
100.0	100.0	99.0	99.0	0.2	0.2	-56.83	25.5	-39.0	46.6	46.6	0.00	N/A		
200.0	200.0	199.0	199.0	0.3	0.3	-56.83	25.5	-39.0	46.6	46.6	0.00	N/A		
300.0	300.0	299.0	299.0	0.5	0.5	-56.83	25.5	-39.0	46.6	46.6	0.00	N/A		
400.0	400.0	399.0	399.0	0.7	0.7	-56.83	25.5	-39.0	46.6	46.6	0.00	N/A		
500.0	500.0	499.0	499.0	0.9	0.9	-56.83	25.5	-39.0	46.6	46.6	0.00	N/A		
600.0	600.0	599.0	599.0	1.0	1.0	-56.83	25.5	-39.0	46.6	46.6	0.00	N/A CC, ES		
700.0	700.0	697.6	697.6	1.2	1.2	-114.24	28.0	-39.1	49.1	49.1	0.00	N/A		
800.0	799.6	795.8	795.5	1.4	1.4	-114.83	35.5	-39.2	56.6	56.6	0.00	N/A		
900.0	898.8	893.3	892.1	1.6	1.6	-115.45	48.0	-39.5	69.1	69.1	0.00	N/A		
1,000.0	997.1	989.7	987.0	2.0	1.9	-115.92	65.1	-39.8	86.6	86.6	0.00	N/A		
1,100.0	1,094.3	1,084.7	1,079.5	2.3	2.3	-116.18	86.7	-40.3	108.8	108.8	0.00	N/A		
1,200.0	1,190.2	1,178.0	1,169.2	2.8	2.7	-116.23	112.3	-40.8	135.7	135.7	0.00	N/A		
1,300.0	1,284.4	1,269.3	1,255.7	3.4	3.2	-116.09	141.6	-41.4	167.2	167.2	0.00	N/A		
1,400.0	1,376.8	1,359.9	1,340.1	4.1	3.8	-115.86	174.5	-42.1	202.9	202.9	0.00	N/A		
1,500.0	1,467.6	1,452.3	1,425.8	4.9	4.3	-116.76	209.0	-42.8	240.8	240.8	0.00	N/A		
1,600.0	1,558.2	1,544.7	1,511.4	5.6	4.9	-117.74	243.6	-43.6	279.0	279.0	0.00	N/A		
1,700.0	1,648.8	1,637.0	1,597.1	6.4	5.5	-118.49	278.1	-44.3	317.2	317.2	0.00	N/A		
1,800.0	1,739.4	1,729.3	1,682.7	7.2	6.1	-119.08	312.6	-45.0	355.4	355.4	0.00	N/A		
1,900.0	1,830.0	1,821.7	1,768.4	8.0	6.7	-119.55	347.2	-45.7	393.7	393.7	0.00	N/A		
2,000.0	1,920.6	1,914.0	1,854.0	8.7	7.3	-119.94	381.7	-46.4	431.9	431.9	0.00	N/A		
2,100.0	2,011.2	2,006.4	1,939.6	9.5	7.9	-120.27	416.2	-47.2	470.2	470.2	0.00	N/A		

Cathedral Energy Services

Anticollision Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Latham L-02
Project:	Weld County	TVD Reference:	WELL @ 4540.0ft (Original Well Elev)
Reference Site:	Latham 12-02 Pad	MD Reference:	WELL @ 4540.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Latham L-02	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Latham 12-02 Pad - Latham 12-02 - OH - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor		
0.0	0.0	0.0	0.0	0.0	0.0	-56.84	32.8	-50.2	59.9					
100.0	100.0	99.0	99.0	0.2	0.2	-56.84	32.8	-50.2	59.9	59.9	0.00	N/A		
200.0	200.0	199.0	199.0	0.3	0.3	-56.84	32.8	-50.2	59.9	59.9	0.00	N/A		
300.0	300.0	299.0	299.0	0.5	0.5	-56.84	32.8	-50.2	59.9	59.9	0.00	N/A		
400.0	400.0	399.0	399.0	0.7	0.7	-56.84	32.8	-50.2	59.9	59.9	0.00	N/A		
500.0	500.0	499.0	499.0	0.9	0.9	-56.84	32.8	-50.2	59.9	59.9	0.00	N/A		
600.0	600.0	599.0	599.0	1.0	1.0	-56.84	32.8	-50.2	59.9	59.9	0.00	N/A CC, ES		
700.0	700.0	696.9	696.8	1.2	1.2	-114.38	35.2	-50.6	62.7	62.7	0.00	N/A		
800.0	799.6	794.3	794.0	1.4	1.4	-115.34	42.5	-51.8	71.1	71.1	0.00	N/A		
900.0	898.8	893.5	892.6	1.6	1.6	-117.94	52.3	-53.4	83.4	83.4	0.00	N/A		
1,000.0	997.1	992.0	990.7	2.0	1.8	-122.36	62.1	-55.1	98.5	98.5	0.00	N/A		
1,100.0	1,094.3	1,089.7	1,087.8	2.3	2.0	-127.49	71.7	-56.7	117.3	117.3	0.00	N/A		
1,200.0	1,190.2	1,186.2	1,183.9	2.8	2.3	-132.59	81.3	-58.3	140.3	140.3	0.00	N/A		
1,300.0	1,284.4	1,281.3	1,278.5	3.4	2.5	-137.26	90.7	-59.9	167.9	167.9	0.00	N/A		
1,400.0	1,376.8	1,374.7	1,371.5	4.1	2.7	-141.34	100.0	-61.4	200.4	200.4	0.00	N/A		
1,500.0	1,467.6	1,466.7	1,463.0	4.9	2.9	-145.13	109.0	-62.9	236.9	236.9	0.00	N/A		
1,600.0	1,558.2	1,558.5	1,554.3	5.6	3.1	-148.12	118.1	-64.4	274.5	274.5	0.00	N/A		
1,700.0	1,648.8	1,650.4	1,645.7	6.4	3.4	-150.40	127.2	-66.0	312.5	312.5	0.00	N/A		
1,800.0	1,739.4	1,742.2	1,737.1	7.2	3.6	-152.19	136.3	-67.5	350.9	350.9	0.00	N/A		
1,900.0	1,830.0	1,834.0	1,828.5	8.0	3.8	-153.62	145.4	-69.0	389.5	389.5	0.00	N/A		
2,000.0	1,920.6	1,925.9	1,919.8	8.7	4.0	-154.80	154.5	-70.5	428.3	428.3	0.00	N/A		
2,100.0	2,011.2	2,017.7	2,011.2	9.5	4.2	-155.79	163.6	-72.0	467.2	467.2	0.00	N/A		

Cathedral Energy Services

Anticollision Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Latham L-02
Project:	Weld County	TVD Reference:	WELL @ 4540.0ft (Original Well Elev)
Reference Site:	Latham 12-02 Pad	MD Reference:	WELL @ 4540.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Latham L-02	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Latham 12-02 Pad - Latham 21-02 - OH - Plan #1													Offset Site Error: 0.0 ft	
Survey Program: 0-MWD													Offset Well Error: 0.0 ft	
Reference		Offset		Semi Major Axis			Distance						Warning	
Measured Depth	Vertical Depth	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface	Offset Wellbore Centre		Between Centres	Between Ellipses	Total Uncertainty Axis	Separation Factor		
(ft)	(ft)	(ft)	(ft)	(ft)	(ft)	(°)	+N/-S (ft)	+E/-W (ft)	(ft)	(ft)				
0.0	0.0	0.0	0.0	0.0	0.0	-62.41	7.3	-13.9	15.8					
100.0	100.0	99.0	99.0	0.2	0.2	-62.41	7.3	-13.9	15.7	15.7	0.00	N/A		
200.0	200.0	199.0	199.0	0.3	0.3	-62.41	7.3	-13.9	15.7	15.7	0.00	N/A		
300.0	300.0	299.0	299.0	0.5	0.5	-62.41	7.3	-13.9	15.7	15.7	0.00	N/A		
400.0	400.0	399.0	399.0	0.7	0.7	-62.41	7.3	-13.9	15.7	15.7	0.00	N/A		
500.0	500.0	499.0	499.0	0.9	0.9	-62.41	7.3	-13.9	15.7	15.7	0.00	N/A		
600.0	600.0	599.0	599.0	1.0	1.0	-62.41	7.3	-13.9	15.7	15.7	0.00	N/A	CC, ES	
700.0	700.0	699.1	699.0	1.2	1.2	-118.55	9.4	-12.6	16.8	16.8	0.00	N/A		
800.0	799.6	799.0	798.7	1.4	1.4	-115.93	16.0	-8.4	20.0	20.0	0.00	N/A		
900.0	898.8	898.9	897.7	1.6	1.6	-112.94	26.9	-1.4	25.4	25.4	0.00	N/A		
1,000.0	997.1	998.5	995.6	2.0	1.9	-110.34	42.2	8.4	33.1	33.1	0.00	N/A		
1,100.0	1,094.3	1,097.9	1,092.3	2.3	2.3	-108.28	61.6	20.8	42.9	42.9	0.00	N/A		
1,200.0	1,190.2	1,196.9	1,187.2	2.8	2.8	-106.69	85.2	35.9	54.9	54.9	0.00	N/A		
1,300.0	1,284.4	1,295.5	1,280.2	3.4	3.4	-105.44	112.8	53.5	68.9	68.9	0.00	N/A		
1,400.0	1,376.8	1,393.6	1,371.0	4.1	4.0	-104.43	144.2	73.6	85.1	85.1	0.00	N/A		
1,500.0	1,467.6	1,491.3	1,459.3	4.9	4.8	-103.31	179.4	96.1	102.9	102.9	0.00	N/A		
1,600.0	1,558.2	1,589.5	1,547.0	5.6	5.5	-101.57	216.6	119.9	121.4	121.4	0.00	N/A		
1,700.0	1,648.8	1,687.7	1,634.7	6.4	6.3	-100.28	253.9	143.7	139.9	139.9	0.00	N/A		
1,800.0	1,739.4	1,786.0	1,722.4	7.2	7.1	-99.30	291.2	167.6	158.4	158.4	0.00	N/A		
1,900.0	1,830.0	1,884.2	1,810.1	8.0	7.9	-98.52	328.5	191.4	177.0	177.0	0.00	N/A		
2,000.0	1,920.6	1,982.4	1,897.8	8.7	8.7	-97.89	365.8	215.2	195.6	195.6	0.00	N/A		
2,100.0	2,011.2	2,080.7	1,985.5	9.5	9.5	-97.37	403.0	239.1	214.2	214.2	0.00	N/A		
2,200.0	2,101.8	2,178.9	2,073.2	10.3	10.3	-96.94	440.3	262.9	232.8	232.8	0.00	N/A		
2,300.0	2,192.5	2,277.1	2,160.9	11.1	11.1	-96.56	477.6	286.7	251.5	251.5	0.00	N/A		
2,400.0	2,283.1	2,375.4	2,248.6	11.9	11.9	-96.24	514.9	310.6	270.2	270.2	0.00	N/A		
2,500.0	2,373.7	2,473.6	2,336.3	12.7	12.7	-95.96	552.2	334.4	288.8	288.8	0.00	N/A		
2,600.0	2,464.3	2,571.8	2,424.0	13.5	13.5	-95.72	589.5	358.2	307.5	307.5	0.00	N/A		
2,700.0	2,554.9	2,670.1	2,511.7	14.3	14.3	-95.50	626.7	382.1	326.2	326.2	0.00	N/A		
2,800.0	2,645.5	2,768.3	2,599.4	15.1	15.1	-95.31	664.0	405.9	344.9	344.9	0.00	N/A		
2,900.0	2,736.1	2,866.5	2,687.1	15.9	15.9	-95.13	701.3	429.7	363.5	363.5	0.00	N/A		
3,000.0	2,826.8	2,964.8	2,774.8	16.7	16.7	-94.98	738.6	453.6	382.2	382.2	0.00	N/A		
3,100.0	2,917.4	3,063.0	2,862.5	17.5	17.5	-94.84	775.9	477.4	400.9	400.9	0.00	N/A		
3,200.0	3,008.0	3,161.2	2,950.2	18.3	18.4	-94.71	813.1	501.3	419.6	419.6	0.00	N/A		
3,300.0	3,098.6	3,259.5	3,037.9	19.1	19.2	-94.59	850.4	525.1	438.3	438.3	0.00	N/A		
3,400.0	3,189.2	3,357.7	3,125.6	19.9	20.0	-94.48	887.7	548.9	457.0	457.0	0.00	N/A		
3,500.0	3,279.8	3,455.9	3,213.3	20.7	20.8	-94.38	925.0	572.8	475.7	475.7	0.00	N/A		
3,600.0	3,370.4	3,554.2	3,301.0	21.5	21.6	-94.29	962.3	596.6	494.4	494.4	0.00	N/A		

Cathedral Energy Services

Anticollision Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Latham L-02
Project:	Weld County	TVD Reference:	WELL @ 4540.0ft (Original Well Elev)
Reference Site:	Latham 12-02 Pad	MD Reference:	WELL @ 4540.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Latham L-02	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Latham 12-02 Pad - Latham 22-02 - OH - Plan #1														Offset Site Error:	0.0 ft
Survey Program: 0-MWD														Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Distance		Total		Separation		Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Uncertainty Axis	Factor			
0.0	0.0	0.0	0.0	0.0	0.0	123.18	-7.3	11.2	13.4						
100.0	100.0	99.0	99.0	0.2	0.2	123.18	-7.3	11.2	13.3	13.3	0.00	N/A			
200.0	200.0	199.0	199.0	0.3	0.3	123.18	-7.3	11.2	13.3	13.3	0.00	N/A			
300.0	300.0	299.0	299.0	0.5	0.5	123.18	-7.3	11.2	13.3	13.3	0.00	N/A			
400.0	400.0	399.0	399.0	0.7	0.7	123.18	-7.3	11.2	13.3	13.3	0.00	N/A			
500.0	500.0	499.0	499.0	0.9	0.9	123.18	-7.3	11.2	13.3	13.3	0.00	N/A			
600.0	600.0	599.0	599.0	1.0	1.0	123.18	-7.3	11.2	13.3	13.3	0.00	N/A CC, ES			
700.0	700.0	698.7	698.6	1.2	1.2	66.86	-6.2	13.4	13.6	13.6	0.00	N/A			
800.0	799.6	798.3	797.9	1.4	1.4	68.73	-2.7	20.4	14.3	14.3	0.00	N/A			
900.0	898.8	897.9	896.7	1.6	1.6	71.30	3.0	32.0	15.7	15.7	0.00	N/A			
1,000.0	997.1	997.6	994.7	2.0	1.9	74.16	10.9	48.1	17.6	17.6	0.00	N/A			
1,100.0	1,094.3	1,097.2	1,091.6	2.3	2.3	76.99	21.1	68.9	20.2	20.2	0.00	N/A			
1,200.0	1,190.2	1,197.1	1,188.2	2.8	2.8	86.70	32.4	91.6	22.6	22.6	0.00	N/A			
1,300.0	1,284.4	1,296.7	1,284.5	3.4	3.2	105.55	43.5	114.4	26.5	26.5	0.00	N/A			
1,400.0	1,376.8	1,395.7	1,380.3	4.1	3.6	125.81	54.7	136.9	35.3	35.3	0.00	N/A			
1,500.0	1,467.6	1,494.0	1,475.4	4.9	4.1	140.40	65.7	159.3	49.8	49.8	0.00	N/A			
1,600.0	1,558.2	1,592.4	1,570.5	5.6	4.5	148.39	76.7	181.8	66.2	66.2	0.00	N/A			
1,700.0	1,648.8	1,690.7	1,665.6	6.4	5.0	153.15	87.8	204.2	83.5	83.5	0.00	N/A			
1,800.0	1,739.4	1,789.0	1,760.7	7.2	5.5	156.28	98.8	226.6	101.1	101.1	0.00	N/A			
1,900.0	1,830.0	1,887.3	1,855.8	8.0	5.9	158.47	109.9	249.0	118.9	118.9	0.00	N/A			
2,000.0	1,920.6	1,985.6	1,950.9	8.7	6.4	160.10	120.9	271.4	136.8	136.8	0.00	N/A			
2,100.0	2,011.2	2,083.9	2,046.0	9.5	6.9	161.34	131.9	293.8	154.8	154.8	0.00	N/A			
2,200.0	2,101.8	2,182.3	2,141.0	10.3	7.3	162.33	143.0	316.3	172.9	172.9	0.00	N/A			
2,300.0	2,192.5	2,280.6	2,236.1	11.1	7.8	163.13	154.0	338.7	191.0	191.0	0.00	N/A			
2,400.0	2,283.1	2,378.9	2,331.2	11.9	8.3	163.79	165.0	361.1	209.1	209.1	0.00	N/A			
2,500.0	2,373.7	2,477.2	2,426.3	12.7	8.8	164.35	176.1	383.5	227.3	227.3	0.00	N/A			
2,600.0	2,464.3	2,575.5	2,521.4	13.5	9.2	164.82	187.1	405.9	245.4	245.4	0.00	N/A			
2,700.0	2,554.9	2,673.8	2,616.5	14.3	9.7	165.23	198.2	428.3	263.6	263.6	0.00	N/A			
2,800.0	2,645.5	2,772.2	2,711.6	15.1	10.2	165.59	209.2	450.7	281.8	281.8	0.00	N/A			
2,900.0	2,736.1	2,870.5	2,806.7	15.9	10.7	165.90	220.2	473.2	300.0	300.0	0.00	N/A			
3,000.0	2,826.8	2,968.8	2,901.7	16.7	11.1	166.18	231.3	495.6	318.2	318.2	0.00	N/A			
3,100.0	2,917.4	3,067.1	2,996.8	17.5	11.6	166.42	242.3	518.0	336.5	336.5	0.00	N/A			
3,200.0	3,008.0	3,165.4	3,091.9	18.3	12.1	166.64	253.4	540.4	354.7	354.7	0.00	N/A			
3,300.0	3,098.6	3,263.7	3,187.0	19.1	12.6	166.84	264.4	562.8	372.9	372.9	0.00	N/A			
3,400.0	3,189.2	3,362.0	3,282.1	19.9	13.0	167.02	275.4	585.2	391.2	391.2	0.00	N/A			
3,500.0	3,279.8	3,460.4	3,377.2	20.7	13.5	167.19	286.5	607.6	409.4	409.4	0.00	N/A			
3,600.0	3,370.4	3,558.7	3,472.3	21.5	14.0	167.34	297.5	630.1	427.6	427.6	0.00	N/A			
3,700.0	3,461.1	3,657.0	3,567.4	22.3	14.5	167.48	308.6	652.5	445.9	445.9	0.00	N/A			
3,800.0	3,551.7	3,755.3	3,662.4	23.1	15.0	167.61	319.6	674.9	464.1	464.1	0.00	N/A			
3,900.0	3,642.3	3,853.6	3,757.5	23.9	15.4	167.72	330.6	697.3	482.4	482.4	0.00	N/A			

Cathedral Energy Services

Anticollision Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Latham L-02
Project:	Weld County	TVD Reference:	WELL @ 4540.0ft (Original Well Elev)
Reference Site:	Latham 12-02 Pad	MD Reference:	WELL @ 4540.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Latham L-02	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Latham 12-02 Pad - Latham 32-02 - OH - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor	Warning	
0.0	0.0	0.0	0.0	0.0	0.0	125.98	-18.2	25.1	31.0					
100.0	100.0	99.0	99.0	0.2	0.2	125.98	-18.2	25.1	31.0	31.0	0.00	N/A		
200.0	200.0	199.0	199.0	0.3	0.3	125.98	-18.2	25.1	31.0	31.0	0.00	N/A		
300.0	300.0	299.0	299.0	0.5	0.5	125.98	-18.2	25.1	31.0	31.0	0.00	N/A		
400.0	400.0	399.0	399.0	0.7	0.7	125.98	-18.2	25.1	31.0	31.0	0.00	N/A		
500.0	500.0	499.0	499.0	0.9	0.9	125.98	-18.2	25.1	31.0	31.0	0.00	N/A		
600.0	600.0	599.0	599.0	1.0	1.0	125.98	-18.2	25.1	31.0	31.0	0.00	N/A	CC, ES	
700.0	700.0	698.0	697.9	1.2	1.2	69.75	-17.6	27.5	31.7	31.7	0.00	N/A		
800.0	799.6	796.9	796.5	1.4	1.4	72.05	-15.8	34.9	33.9	33.9	0.00	N/A		
900.0	898.8	895.7	894.5	1.6	1.6	75.22	-12.9	47.3	37.8	37.8	0.00	N/A		
1,000.0	997.1	994.4	991.6	2.0	1.9	78.64	-8.7	64.5	43.3	43.3	0.00	N/A		
1,100.0	1,094.3	1,093.0	1,087.5	2.3	2.3	81.87	-3.4	86.6	50.5	50.5	0.00	N/A		
1,200.0	1,190.2	1,191.3	1,181.9	2.8	2.8	84.68	3.1	113.4	59.5	59.5	0.00	N/A		
1,300.0	1,284.4	1,289.4	1,274.6	3.4	3.4	87.00	10.7	144.7	70.2	70.2	0.00	N/A		
1,400.0	1,376.8	1,387.3	1,365.2	4.1	4.1	88.85	19.3	180.6	82.5	82.5	0.00	N/A		
1,500.0	1,467.6	1,484.9	1,453.6	4.9	4.8	89.92	29.0	220.8	96.5	96.5	0.00	N/A		
1,600.0	1,558.2	1,582.0	1,539.3	5.6	5.7	88.52	39.7	265.1	112.1	112.1	0.00	N/A		
1,700.0	1,648.8	1,680.1	1,624.4	6.4	6.6	86.08	51.2	312.7	128.9	128.9	0.00	N/A		
1,800.0	1,739.4	1,778.6	1,709.7	7.2	7.6	84.17	62.8	360.4	145.8	145.8	0.00	N/A		
1,900.0	1,830.0	1,877.0	1,795.0	8.0	8.5	82.66	74.3	408.2	162.9	162.9	0.00	N/A		
2,000.0	1,920.6	1,975.5	1,880.4	8.7	9.4	81.43	85.8	455.9	180.1	180.1	0.00	N/A		
2,100.0	2,011.2	2,073.9	1,965.7	9.5	10.4	80.42	97.3	503.6	197.3	197.3	0.00	N/A		
2,200.0	2,101.8	2,172.4	2,051.0	10.3	11.3	79.58	108.9	551.4	214.6	214.6	0.00	N/A		
2,300.0	2,192.5	2,270.8	2,136.3	11.1	12.3	78.85	120.4	599.1	231.9	231.9	0.00	N/A		
2,400.0	2,283.1	2,369.3	2,221.7	11.9	13.3	78.23	131.9	646.8	249.3	249.3	0.00	N/A		
2,500.0	2,373.7	2,467.7	2,307.0	12.7	14.2	77.69	143.4	694.6	266.7	266.7	0.00	N/A		
2,600.0	2,464.3	2,566.2	2,392.3	13.5	15.2	77.22	155.0	742.3	284.1	284.1	0.00	N/A		
2,700.0	2,554.9	2,664.6	2,477.6	14.3	16.1	76.80	166.5	790.1	301.5	301.5	0.00	N/A		
2,800.0	2,645.5	2,763.1	2,563.0	15.1	17.1	76.43	178.0	837.8	318.9	318.9	0.00	N/A		
2,900.0	2,736.1	2,861.5	2,648.3	15.9	18.1	76.09	189.6	885.5	336.4	336.4	0.00	N/A		
3,000.0	2,826.8	2,960.0	2,733.6	16.7	19.0	75.79	201.1	933.3	353.8	353.8	0.00	N/A		
3,100.0	2,917.4	3,058.4	2,818.9	17.5	20.0	75.52	212.6	981.0	371.3	371.3	0.00	N/A		
3,200.0	3,008.0	3,156.9	2,904.3	18.3	21.0	75.27	224.1	1,028.8	388.8	388.8	0.00	N/A		
3,300.0	3,098.6	3,255.3	2,989.6	19.1	21.9	75.04	235.7	1,076.5	406.2	406.2	0.00	N/A		
3,400.0	3,189.2	3,353.8	3,074.9	19.9	22.9	74.83	247.2	1,124.2	423.7	423.7	0.00	N/A		
3,500.0	3,279.8	3,452.2	3,160.2	20.7	23.8	74.64	258.7	1,172.0	441.2	441.2	0.00	N/A		
3,600.0	3,370.4	3,550.7	3,245.6	21.5	24.8	74.46	270.2	1,219.7	458.7	458.7	0.00	N/A		
3,700.0	3,461.1	3,649.1	3,330.9	22.3	25.8	74.30	281.8	1,267.5	476.2	476.2	0.00	N/A		
3,800.0	3,551.7	3,747.6	3,416.2	23.1	26.7	74.14	293.3	1,315.2	493.7	493.7	0.00	N/A		

Cathedral Energy Services

Anticollision Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Latham L-02
Project:	Weld County	TVD Reference:	WELL @ 4540.0ft (Original Well Elev)
Reference Site:	Latham 12-02 Pad	MD Reference:	WELL @ 4540.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Latham L-02	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design Latham 12-02 Pad - Latham G-02 - OH - Plan #1													Offset Site Error:	0.0 ft
Survey Program: 0-MWD													Offset Well Error:	0.0 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Distance		Total Uncertainty Axis	Separation Factor	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)						
0.0	0.0	0.0	0.0	0.0	0.0	-59.85	14.6	-25.1	29.0					
100.0	100.0	99.0	99.0	0.2	0.2	-59.85	14.6	-25.1	29.0	29.0	0.00	N/A		
200.0	200.0	199.0	199.0	0.3	0.3	-59.85	14.6	-25.1	29.0	29.0	0.00	N/A		
300.0	300.0	299.0	299.0	0.5	0.5	-59.85	14.6	-25.1	29.0	29.0	0.00	N/A		
400.0	400.0	399.0	399.0	0.7	0.7	-59.85	14.6	-25.1	29.0	29.0	0.00	N/A		
500.0	500.0	499.0	499.0	0.9	0.9	-59.85	14.6	-25.1	29.0	29.0	0.00	N/A		
600.0	600.0	599.0	599.0	1.0	1.0	-59.85	14.6	-25.1	29.0	29.0	0.00	N/A CC, ES		
700.0	700.0	698.8	698.8	1.2	1.2	-116.53	16.9	-24.0	30.5	30.5	0.00	N/A		
800.0	799.6	798.5	798.2	1.4	1.4	-115.25	24.0	-20.8	34.8	34.8	0.00	N/A		
900.0	898.8	898.0	896.8	1.6	1.6	-113.63	35.7	-15.5	42.1	42.1	0.00	N/A		
1,000.0	997.1	997.0	994.2	2.0	1.9	-112.05	52.0	-8.2	52.3	52.3	0.00	N/A		
1,100.0	1,094.3	1,095.8	1,090.3	2.3	2.3	-110.80	72.7	1.2	65.3	65.3	0.00	N/A		
1,200.0	1,190.2	1,194.6	1,186.1	2.8	2.7	-112.29	94.7	11.1	80.5	80.5	0.00	N/A		
1,300.0	1,284.4	1,292.8	1,281.3	3.4	3.1	-115.94	116.6	21.0	98.0	98.0	0.00	N/A		
1,400.0	1,376.8	1,390.3	1,375.8	4.1	3.5	-120.52	138.3	30.8	118.3	118.3	0.00	N/A		
1,500.0	1,467.6	1,486.9	1,469.5	4.9	4.0	-125.31	159.8	40.5	141.6	141.6	0.00	N/A		
1,600.0	1,558.2	1,583.4	1,563.1	5.6	4.4	-128.97	181.3	50.2	165.8	165.8	0.00	N/A		
1,700.0	1,648.8	1,680.0	1,656.8	6.4	4.8	-131.70	202.8	59.9	190.5	190.5	0.00	N/A		
1,800.0	1,739.4	1,776.5	1,750.4	7.2	5.2	-133.80	224.3	69.7	215.6	215.6	0.00	N/A		
1,900.0	1,830.0	1,873.1	1,844.0	8.0	5.7	-135.46	245.8	79.4	240.8	240.8	0.00	N/A		
2,000.0	1,920.6	1,969.6	1,937.6	8.7	6.1	-136.81	267.3	89.1	266.2	266.2	0.00	N/A		
2,100.0	2,011.2	2,066.2	2,031.3	9.5	6.6	-137.93	288.8	98.8	291.6	291.6	0.00	N/A		
2,200.0	2,101.8	2,162.7	2,124.9	10.3	7.0	-138.86	310.3	108.5	317.2	317.2	0.00	N/A		
2,300.0	2,192.5	2,259.3	2,218.5	11.1	7.4	-139.66	331.8	118.2	342.9	342.9	0.00	N/A		
2,400.0	2,283.1	2,355.8	2,312.2	11.9	7.9	-140.35	353.3	127.9	368.6	368.6	0.00	N/A		
2,500.0	2,373.7	2,452.4	2,405.8	12.7	8.3	-140.94	374.8	137.6	394.3	394.3	0.00	N/A		
2,600.0	2,464.3	2,549.0	2,499.4	13.5	8.8	-141.47	396.3	147.3	420.1	420.1	0.00	N/A		
2,700.0	2,554.9	2,645.5	2,593.0	14.3	9.2	-141.93	417.8	157.0	445.9	445.9	0.00	N/A		
2,800.0	2,645.5	2,742.1	2,686.7	15.1	9.6	-142.34	439.3	166.8	471.7	471.7	0.00	N/A		
2,900.0	2,736.1	2,838.6	2,780.3	15.9	10.1	-142.71	460.8	176.5	497.6	497.6	0.00	N/A		

Cathedral Energy Services

Anticollision Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Latham L-02
Project:	Weld County	TVD Reference:	WELL @ 4540.0ft (Original Well Elev)
Reference Site:	Latham 12-02 Pad	MD Reference:	WELL @ 4540.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Latham L-02	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Offset Design													Latham 12-02 Pad - Latham H-02 - OH - Plan #1		Offset Site Error:		0.0 ft
Survey Program: 0-MWD													Offset Well Error:		0.0 ft		
Reference		Offset		Semi Major Axis			Distance							Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Total Uncertainty Axis	Separation Factor					
0.0	0.0	0.0	0.0	0.0	0.0	125.13	-25.5	36.2	44.3								
100.0	100.0	100.0	100.0	0.2	0.2	125.13	-25.5	36.2	44.3	44.3	0.00	N/A					
200.0	200.0	200.0	200.0	0.3	0.3	125.13	-25.5	36.2	44.3	44.3	0.00	N/A					
300.0	300.0	300.0	300.0	0.5	0.5	125.13	-25.5	36.2	44.3	44.3	0.00	N/A					
400.0	400.0	400.0	400.0	0.7	0.7	125.13	-25.5	36.2	44.3	44.3	0.00	N/A					
500.0	500.0	500.0	500.0	0.9	0.9	125.13	-25.5	36.2	44.3	44.3	0.00	N/A					
600.0	600.0	600.0	600.0	1.0	1.0	125.13	-25.5	36.2	44.3	44.3	0.00	N/A	CC, ES				
700.0	700.0	697.9	697.8	1.2	1.2	69.71	-26.0	38.7	45.7	45.7	0.00	N/A					
800.0	799.6	795.7	795.4	1.4	1.4	74.20	-27.6	46.0	50.1	50.1	0.00	N/A					
900.0	898.8	895.3	894.4	1.6	1.6	81.99	-29.6	55.6	55.7	55.7	0.00	N/A					
1,000.0	997.1	994.4	993.1	2.0	1.8	92.96	-31.6	65.2	62.2	62.2	0.00	N/A					
1,100.0	1,094.3	1,092.8	1,091.0	2.3	2.0	105.47	-33.5	74.7	71.8	71.8	0.00	N/A					
1,200.0	1,190.2	1,190.2	1,187.9	2.8	2.3	117.57	-35.5	84.0	86.5	86.5	0.00	N/A					
1,300.0	1,284.4	1,286.3	1,283.6	3.4	2.5	127.91	-37.4	93.3	107.1	107.1	0.00	N/A					
1,400.0	1,376.8	1,380.9	1,377.7	4.1	2.7	136.10	-39.4	102.4	134.0	134.0	0.00	N/A					
1,500.0	1,467.6	1,474.1	1,470.5	4.9	2.9	142.61	-41.2	111.4	165.9	165.9	0.00	N/A					
1,600.0	1,558.2	1,567.3	1,563.2	5.6	3.1	147.22	-43.1	120.4	199.6	199.6	0.00	N/A					
1,700.0	1,648.8	1,660.4	1,655.9	6.4	3.4	150.51	-45.0	129.4	234.0	234.0	0.00	N/A					
1,800.0	1,739.4	1,753.5	1,748.5	7.2	3.6	152.97	-46.9	138.3	269.0	269.0	0.00	N/A					
1,900.0	1,830.0	1,846.7	1,841.2	8.0	3.8	154.86	-48.8	147.3	304.3	304.3	0.00	N/A					
2,000.0	1,920.6	1,939.8	1,933.9	8.7	4.0	156.35	-50.6	156.3	339.9	339.9	0.00	N/A					
2,100.0	2,011.2	2,032.9	2,026.6	9.5	4.3	157.57	-52.5	165.3	375.6	375.6	0.00	N/A					
2,200.0	2,101.8	2,126.1	2,119.3	10.3	4.5	158.58	-54.4	174.3	411.4	411.4	0.00	N/A					
2,300.0	2,192.5	2,219.2	2,211.9	11.1	4.7	159.42	-56.3	183.2	447.4	447.4	0.00	N/A					
2,400.0	2,283.1	2,312.3	2,304.6	11.9	4.9	160.14	-58.2	192.2	483.4	483.4	0.00	N/A					

Cathedral Energy Services

Anticollision Report

Company:	Bonanza Creek Energy Operating Company, LLC	Local Co-ordinate Reference:	Well Latham L-02
Project:	Weld County	TVD Reference:	WELL @ 4540.0ft (Original Well Elev)
Reference Site:	Latham 12-02 Pad	MD Reference:	WELL @ 4540.0ft (Original Well Elev)
Site Error:	0.0ft	North Reference:	True
Reference Well:	Latham L-02	Survey Calculation Method:	Minimum Curvature
Well Error:	0.0ft	Output errors are at	2.00 sigma
Reference Wellbore	OH	Database:	USA EDM 5000 Multi Users DB
Reference Design:	Plan #1	Offset TVD Reference:	Offset Datum

Reference Depths are relative to WELL @ 4540.0ft (Original Well Elev)
Offset Depths are relative to Offset Datum
Central Meridian is -105.500000 °

Coordinates are relative to: Latham L-02
Coordinate System is US State Plane 1983, Colorado Northern Zone
Grid Convergence at Surface is: 0.70°

