



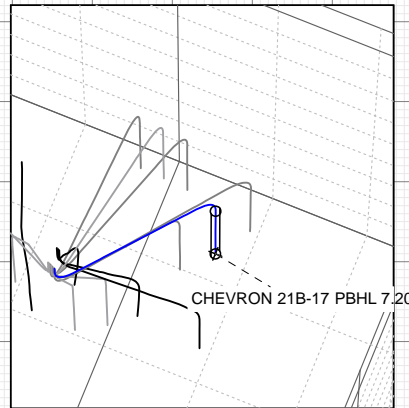
## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	175.00	0.00	0.00	175.00	0.00	0.00	0.00	0.00	0.00	
3	1176.08	30.03	292.92	1130.86	99.84	-236.17	3.00	292.92	256.41	
4	4340.15	30.03	292.92	3870.14	716.48	-1694.77	0.00	0.00	1839.99	
5	5341.23	0.00	0.00	4826.00	816.32	-1930.94	3.00	180.00	2096.40	
6	7593.23	0.00	0.00	7078.00	816.32	-1930.94	0.00	0.00	2096.40	CHEVRON 21B-17 PBHL 7.20

Project: Garfield County, CO (UTM 1  
Site: S17-T6S-R96W (PC5A)  
Well: CHEVRON 21B-17  
Wellbore: OH  
Design: PLAN #2

## FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3814.00	4275.31	OHIO_CREEK.MBL (TVD)
4113.00	4610.53	WILLIAMS_FORK.MBL (TVD)
4896.00	5411.23	TOP_GAS.MBL (TVD)
6458.00	6973.23	CAMEO.MBL (TVD)
6928.00	7443.23	ROLLINS.MBL (TVD)
7078.00	7593.23	TD.MBL (TVD)



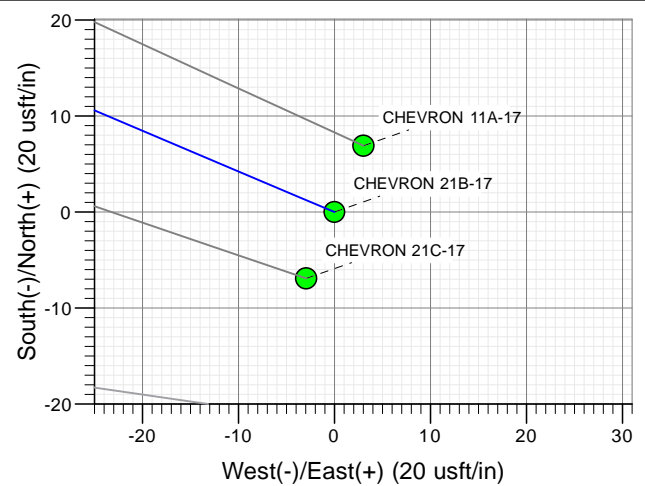
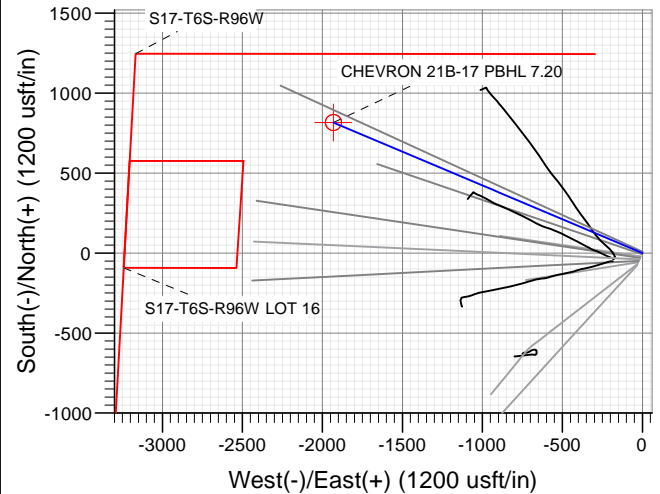
Start Drop -3.00

EOD; INC=0°

TD at 7593.23

CHEVRON 21B-17 PBHL 7.20

Type	TD	Target	No Target (Freehand)	Azimuth	Origin Type	N/S	E/W	From TVD
Name	CHEVRON 21B-17 PBHL 7.20			7078.00	816.32	-1930.94	39.530565	-108.135811
	CHEVRON 21B-17 PBHL			7108.00	809.93	-1702.63	39.530547	-108.135002

Azimuths to True North  
Magnetic North: 9.82°Magnetic Field  
Strength: 51888.8snT  
Dip Angle: 65.93°  
Date: 11/10/2015  
Model: HDGM

## CASING DETAILS

No casing data is available

Vertical Section at 292.92° (1200 usft/in)

## WELL DETAILS: CHEVRON 21B-17

+N/-S	+E/-W	Northing	Ground Level:	5583.00	Latitude	Longitude
0.00	0.00	14367214.80	Easting	2450042.60	39.528325	-108.128968

CATHEDRAL



# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well CHEVRON 21B-17
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	30' KB @ 5613.00usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	30' KB @ 5613.00usft
<b>Site:</b>	S17-T6S-R96W (PC5A)	<b>North Reference:</b>	True
<b>Well:</b>	CHEVRON 21B-17	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #2		

<b>Project</b>	Garfield County, CO (UTM 12N)		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	NAD 1927 - Western US		
<b>Map Zone:</b>	Zone 12N (114 W to 108 W)		

<b>Site</b>	S17-T6S-R96W (PC5A)		
<b>Site Position:</b>		<b>Northing:</b>	14,367,212.50 usft
<b>From:</b>	Map	<b>Easting:</b>	2,450,041.70 usft
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16"
		<b>Latitude:</b>	39.528318
		<b>Longitude:</b>	-108.128972
		<b>Grid Convergence:</b>	1.83 °

<b>Well</b>	CHEVRON 21B-17		
<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>
	<b>+E/-W</b>	0.00 usft	<b>Easting:</b>
<b>Position Uncertainty</b>	0.00 usft	<b>Wellhead Elevation:</b>	0.00 usft
		<b>Latitude:</b>	39.528325
		<b>Longitude:</b>	-108.128968
		<b>Ground Level:</b>	5,583.00 usft

<b>Wellbore</b>	OH		
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination</b>
			(°)
	HDGM	11/10/2015	9.82
			Dip Angle (°)
			65.93
			Field Strength (nT)
			51,889

<b>Design</b>	PLAN #2		
<b>Audit Notes:</b>			
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>
			0.00
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S</b>	<b>+E/-W</b>
	(usft)	(usft)	(usft)
	0.00	0.00	0.00
			<b>Direction</b>
			(°)
			292.92

<b>Plan Sections</b>										
<b>Measured Depth</b>	<b>Inclination</b>	<b>Azimuth</b>	<b>Vertical Depth</b>	<b>+N/-S</b>	<b>+E/-W</b>	<b>Dogleg Rate</b>	<b>Build Rate</b>	<b>Turn Rate</b>	<b>TFO</b>	<b>Target</b>
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)	(°)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
175.00	0.00	0.00	175.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,176.08	30.03	292.92	1,130.86	99.84	-236.17	3.00	3.00	0.00	292.92	
4,340.15	30.03	292.92	3,870.14	716.48	-1,694.77	0.00	0.00	0.00	0.00	
5,341.23	0.00	0.00	4,826.00	816.32	-1,930.94	3.00	-3.00	0.00	180.00	
7,593.23	0.00	0.00	7,078.00	816.32	-1,930.94	0.00	0.00	0.00	0.00	CHEVRON 21B-17 PI

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well CHEVRON 21B-17
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	30' KB @ 5613.00usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	30' KB @ 5613.00usft
<b>Site:</b>	S17-T6S-R96W (PC5A)	<b>North Reference:</b>	True
<b>Well:</b>	CHEVRON 21B-17	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	
175.00	0.00	0.00	175.00	0.00	0.00	0.00	0.00	0.00	KOP @ 175'
200.00	0.75	292.92	200.00	0.06	-0.15	0.16	3.00	3.00	
300.00	3.75	292.92	299.91	1.59	-3.77	4.09	3.00	3.00	
400.00	6.75	292.92	399.48	5.15	-12.19	13.24	3.00	3.00	
500.00	9.75	292.92	498.43	10.74	-25.41	27.59	3.00	3.00	
600.00	12.75	292.92	596.50	18.34	-43.38	47.09	3.00	3.00	
700.00	15.75	292.92	693.41	27.92	-66.05	71.71	3.00	3.00	
800.00	18.75	292.92	788.90	39.47	-93.36	101.36	3.00	3.00	
900.00	21.75	292.92	882.71	52.94	-125.23	135.96	3.00	3.00	
1,000.00	24.75	292.92	974.58	68.31	-161.59	175.43	3.00	3.00	
1,100.00	27.75	292.92	1,064.26	85.53	-202.32	219.66	3.00	3.00	
1,176.08	30.03	292.92	1,130.86	99.84	-236.17	256.41	3.00	3.00	EOB; INC=30.03°
1,200.00	30.03	292.92	1,151.57	104.51	-247.20	268.38	0.00	0.00	
1,300.00	30.03	292.92	1,238.15	124.00	-293.30	318.43	0.00	0.00	
1,400.00	30.03	292.92	1,324.72	143.48	-339.40	368.48	0.00	0.00	
1,500.00	30.03	292.92	1,411.30	162.97	-385.50	418.53	0.00	0.00	
1,600.00	30.03	292.92	1,497.87	182.46	-431.60	468.58	0.00	0.00	
1,700.00	30.03	292.92	1,584.45	201.95	-477.69	518.63	0.00	0.00	
1,800.00	30.03	292.92	1,671.02	221.44	-523.79	568.68	0.00	0.00	
1,900.00	30.03	292.92	1,757.59	240.93	-569.89	618.73	0.00	0.00	
2,000.00	30.03	292.92	1,844.17	260.42	-615.99	668.77	0.00	0.00	
2,100.00	30.03	292.92	1,930.74	279.90	-662.09	718.82	0.00	0.00	
2,200.00	30.03	292.92	2,017.32	299.39	-708.19	768.87	0.00	0.00	
2,300.00	30.03	292.92	2,103.89	318.88	-754.29	818.92	0.00	0.00	
2,400.00	30.03	292.92	2,190.47	338.37	-800.38	868.97	0.00	0.00	
2,500.00	30.03	292.92	2,277.04	357.86	-846.48	919.02	0.00	0.00	
2,600.00	30.03	292.92	2,363.61	377.35	-892.58	969.07	0.00	0.00	
2,700.00	30.03	292.92	2,450.19	396.84	-938.68	1,019.12	0.00	0.00	
2,800.00	30.03	292.92	2,536.76	416.32	-984.78	1,069.17	0.00	0.00	
2,900.00	30.03	292.92	2,623.34	435.81	-1,030.88	1,119.21	0.00	0.00	
3,000.00	30.03	292.92	2,709.91	455.30	-1,076.98	1,169.26	0.00	0.00	
3,100.00	30.03	292.92	2,796.49	474.79	-1,123.07	1,219.31	0.00	0.00	
3,200.00	30.03	292.92	2,883.06	494.28	-1,169.17	1,269.36	0.00	0.00	
3,300.00	30.03	292.92	2,969.63	513.77	-1,215.27	1,319.41	0.00	0.00	
3,400.00	30.03	292.92	3,056.21	533.26	-1,261.37	1,369.46	0.00	0.00	
3,500.00	30.03	292.92	3,142.78	552.74	-1,307.47	1,419.51	0.00	0.00	
3,600.00	30.03	292.92	3,229.36	572.23	-1,353.57	1,469.56	0.00	0.00	
3,700.00	30.03	292.92	3,315.93	591.72	-1,399.67	1,519.60	0.00	0.00	
3,800.00	30.03	292.92	3,402.51	611.21	-1,445.76	1,569.65	0.00	0.00	
3,900.00	30.03	292.92	3,489.08	630.70	-1,491.86	1,619.70	0.00	0.00	
4,000.00	30.03	292.92	3,575.66	650.19	-1,537.96	1,669.75	0.00	0.00	
4,100.00	30.03	292.92	3,662.23	669.68	-1,584.06	1,719.80	0.00	0.00	
4,200.00	30.03	292.92	3,748.80	689.16	-1,630.16	1,769.85	0.00	0.00	
4,275.31	30.03	292.92	3,814.00	703.84	-1,664.87	1,807.54	0.00	0.00	OHIO_CREEK.MBL (TVD)
4,300.00	30.03	292.92	3,835.38	708.65	-1,676.26	1,819.90	0.00	0.00	
4,340.15	30.03	292.92	3,870.14	716.48	-1,694.77	1,839.99	0.00	0.00	Start Drop -3.00
4,400.00	28.24	292.92	3,922.41	727.82	-1,721.60	1,869.13	3.00	-3.00	
4,500.00	25.24	292.92	4,011.71	745.34	-1,763.04	1,914.11	3.00	-3.00	
4,600.00	22.24	292.92	4,103.24	761.01	-1,800.11	1,954.36	3.00	-3.00	
4,610.53	21.92	292.92	4,113.00	762.55	-1,803.75	1,958.32	3.00	-3.00	WILLIAMS_FORK.MBL (TVD)

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well CHEVRON 21B-17
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	30' KB @ 5613.00usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	30' KB @ 5613.00usft
<b>Site:</b>	S17-T6S-R96W (PC5A)	<b>North Reference:</b>	True
<b>Well:</b>	CHEVRON 21B-17	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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
4,700.00	19.24	292.92	4,196.75	774.80	-1,832.72	1,989.77	3.00	-3.00	
4,800.00	16.24	292.92	4,291.99	786.66	-1,860.77	2,020.23	3.00	-3.00	
4,900.00	13.24	292.92	4,388.69	796.56	-1,884.20	2,045.66	3.00	-3.00	
5,000.00	10.24	292.92	4,486.59	804.48	-1,902.94	2,066.00	3.00	-3.00	
5,100.00	7.24	292.92	4,585.41	810.40	-1,916.93	2,081.19	3.00	-3.00	
5,200.00	4.24	292.92	4,684.90	814.29	-1,926.13	2,091.18	3.00	-3.00	
5,300.00	1.24	292.92	4,784.78	816.15	-1,930.53	2,095.96	3.00	-3.00	
5,341.23	0.00	0.00	4,826.00	816.32	-1,930.94	2,096.40	3.00	-3.00	EOD; INC=0°
5,400.00	0.00	0.00	4,884.77	816.32	-1,930.94	2,096.40	0.00	0.00	
5,411.23	0.00	0.00	4,896.00	816.32	-1,930.94	2,096.40	0.00	0.00	TOP_GAS.MBL (TVD)
5,500.00	0.00	0.00	4,984.77	816.32	-1,930.94	2,096.40	0.00	0.00	
5,600.00	0.00	0.00	5,084.77	816.32	-1,930.94	2,096.40	0.00	0.00	
5,700.00	0.00	0.00	5,184.77	816.32	-1,930.94	2,096.40	0.00	0.00	
5,800.00	0.00	0.00	5,284.77	816.32	-1,930.94	2,096.40	0.00	0.00	
5,900.00	0.00	0.00	5,384.77	816.32	-1,930.94	2,096.40	0.00	0.00	
6,000.00	0.00	0.00	5,484.77	816.32	-1,930.94	2,096.40	0.00	0.00	
6,100.00	0.00	0.00	5,584.77	816.32	-1,930.94	2,096.40	0.00	0.00	
6,200.00	0.00	0.00	5,684.77	816.32	-1,930.94	2,096.40	0.00	0.00	
6,300.00	0.00	0.00	5,784.77	816.32	-1,930.94	2,096.40	0.00	0.00	
6,400.00	0.00	0.00	5,884.77	816.32	-1,930.94	2,096.40	0.00	0.00	
6,500.00	0.00	0.00	5,984.77	816.32	-1,930.94	2,096.40	0.00	0.00	
6,600.00	0.00	0.00	6,084.77	816.32	-1,930.94	2,096.40	0.00	0.00	
6,700.00	0.00	0.00	6,184.77	816.32	-1,930.94	2,096.40	0.00	0.00	
6,800.00	0.00	0.00	6,284.77	816.32	-1,930.94	2,096.40	0.00	0.00	
6,900.00	0.00	0.00	6,384.77	816.32	-1,930.94	2,096.40	0.00	0.00	
6,973.23	0.00	0.00	6,458.00	816.32	-1,930.94	2,096.40	0.00	0.00	CAMEO.MBL (TVD)
7,000.00	0.00	0.00	6,484.77	816.32	-1,930.94	2,096.40	0.00	0.00	
7,100.00	0.00	0.00	6,584.77	816.32	-1,930.94	2,096.40	0.00	0.00	
7,200.00	0.00	0.00	6,684.77	816.32	-1,930.94	2,096.40	0.00	0.00	
7,300.00	0.00	0.00	6,784.77	816.32	-1,930.94	2,096.40	0.00	0.00	
7,400.00	0.00	0.00	6,884.77	816.32	-1,930.94	2,096.40	0.00	0.00	
7,443.23	0.00	0.00	6,928.00	816.32	-1,930.94	2,096.40	0.00	0.00	ROLLINS.MBL (TVD)
7,500.00	0.00	0.00	6,984.77	816.32	-1,930.94	2,096.40	0.00	0.00	
7,593.23	0.00	0.00	7,078.00	816.32	-1,930.94	2,096.40	0.00	0.00	TD at 7593.23 - TD.MBL (TVD)

### Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
CHEVRON 21B-17 PBH - hit/miss target - Shape	0.00	0.00	7,078.00	816.32	-1,930.94	14,367,969.10	2,448,086.60	39.530565	-108.135811
- plan hits target center - Circle (radius 50.00)									
CHEVRON 21B-17 PBH - plan misses target center by 230.36usft at 7593.23usft MD (7078.00 TVD, 816.32 N, -1930.94 E) - Circle (radius 50.00)	0.00	0.00	7,108.00	809.93	-1,702.63	14,367,970.00	2,448,315.00	39.530547	-108.135002

# Cathedral Energy Services

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well CHEVRON 21B-17
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	30' KB @ 5613.00usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	30' KB @ 5613.00usft
<b>Site:</b>	S17-T6S-R96W (PC5A)	<b>North Reference:</b>	True
<b>Well:</b>	CHEVRON 21B-17	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #2		

### Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,275.31	3,814.00	OHIO_CREEK.MBL (TVD)			
4,610.53	4,113.00	WILLIAMS_FORK.MBL (TVD)			
5,411.23	4,896.00	TOP_GAS.MBL (TVD)			
6,973.23	6,458.00	CAMEO.MBL (TVD)			
7,443.23	6,928.00	ROLLINS.MBL (TVD)			
7,593.23	7,078.00	TD.MBL (TVD)			

### Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
175.00	175.00	0.00	0.00	KOP @ 175'
1,176.08	1,130.86	99.84	-236.17	EOB; INC=30.03°
4,340.15	3,870.14	716.48	-1,694.77	Start Drop -3.00
5,341.23	4,826.00	816.32	-1,930.94	EOD; INC=0°
7,593.23	7,078.00	816.32	-1,930.94	TD at 7593.23