

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well CHEVRON 11D-17
Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 5613.0usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 5613.0usft
Site:	S17-T6S-R96W (PC5A)	North Reference:	True
Well:	CHEVRON 11D-17	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

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

Site		S17-T6S-R96W (PC5A)			
Site Position:		Northing:	14,367,212.50 usft	Latitude:	39.528318
From:	Map	Easting:	2,450,041.70 usft	Longitude:	-108.128972
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	1.83 °

Well	CHEVRON 11D-17					
Well Position	+N/-S	0.0 usft	Northing:	14,367,175.20 usft	Latitude:	39.528217
	+E/-W	0.0 usft	Easting:	2,450,027.20 usft	Longitude:	-108.129027
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	5,583.0 usft

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

Design	PLAN #1			
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	272.65

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	
300.0	0.00	0.00	300.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,548.3	37.45	272.65	1,461.3	18.2	-393.2	3.00	3.00	0.00	272.65	
4,224.2	37.45	272.65	3,585.7	93.6	-2,018.6	0.00	0.00	0.00	0.00	
5,472.6	0.00	0.00	4,747.0	111.8	-2,411.9	3.00	-3.00	0.00	180.00	
7,765.6	0.00	0.00	7,040.0	111.8	-2,411.9	0.00	0.00	0.00	0.00	CHEVRON 11D-17 PI

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Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 5613.0usft
Site:	S17-T6S-R96W (PC5A)	North Reference:	True
Well:	CHEVRON 11D-17	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

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	Start Build 3.00
400.0	3.00	272.65	400.0	0.1	-2.6	2.6	3.00	3.00	
500.0	6.00	272.65	499.6	0.5	-10.5	10.5	3.00	3.00	
600.0	9.00	272.65	598.8	1.1	-23.5	23.5	3.00	3.00	
700.0	12.00	272.65	697.1	1.9	-41.7	41.7	3.00	3.00	
800.0	15.00	272.65	794.3	3.0	-65.0	65.1	3.00	3.00	
900.0	18.00	272.65	890.2	4.3	-93.4	93.5	3.00	3.00	
1,000.0	21.00	272.65	984.4	5.9	-126.7	126.9	3.00	3.00	
1,100.0	24.00	272.65	1,076.8	7.6	-164.9	165.1	3.00	3.00	
1,200.0	27.00	272.65	1,167.1	9.6	-207.9	208.2	3.00	3.00	
1,300.0	30.00	272.65	1,254.9	11.8	-255.6	255.9	3.00	3.00	
1,400.0	33.00	272.65	1,340.2	14.3	-307.8	308.1	3.00	3.00	
1,500.0	36.00	272.65	1,422.6	16.9	-364.4	364.8	3.00	3.00	
1,548.3	37.45	272.65	1,461.3	18.2	-393.2	393.7	3.00	3.00	Start 2675.9 hold at 1548.3 MD
1,600.0	37.45	272.65	1,502.3	19.7	-424.6	425.1	0.00	0.00	
1,700.0	37.45	272.65	1,581.7	22.5	-485.4	485.9	0.00	0.00	
1,800.0	37.45	272.65	1,661.1	25.3	-546.1	546.7	0.00	0.00	
1,900.0	37.45	272.65	1,740.5	28.1	-606.8	607.5	0.00	0.00	
2,000.0	37.45	272.65	1,819.9	30.9	-667.6	668.3	0.00	0.00	
2,100.0	37.45	272.65	1,899.3	33.8	-728.3	729.1	0.00	0.00	
2,200.0	37.45	272.65	1,978.7	36.6	-789.1	789.9	0.00	0.00	
2,300.0	37.45	272.65	2,058.1	39.4	-849.8	850.7	0.00	0.00	
2,400.0	37.45	272.65	2,137.4	42.2	-910.6	911.5	0.00	0.00	
2,500.0	37.45	272.65	2,216.8	45.0	-971.3	972.3	0.00	0.00	
2,600.0	37.45	272.65	2,296.2	47.8	-1,032.0	1,033.1	0.00	0.00	
2,700.0	37.45	272.65	2,375.6	50.7	-1,092.8	1,094.0	0.00	0.00	
2,800.0	37.45	272.65	2,455.0	53.5	-1,153.5	1,154.8	0.00	0.00	
2,900.0	37.45	272.65	2,534.4	56.3	-1,214.3	1,215.6	0.00	0.00	
3,000.0	37.45	272.65	2,613.8	59.1	-1,275.0	1,276.4	0.00	0.00	
3,100.0	37.45	272.65	2,693.2	61.9	-1,335.7	1,337.2	0.00	0.00	
3,200.0	37.45	272.65	2,772.6	64.7	-1,396.5	1,398.0	0.00	0.00	
3,300.0	37.45	272.65	2,851.9	67.6	-1,457.2	1,458.8	0.00	0.00	
3,400.0	37.45	272.65	2,931.3	70.4	-1,518.0	1,519.6	0.00	0.00	
3,500.0	37.45	272.65	3,010.7	73.2	-1,578.7	1,580.4	0.00	0.00	
3,600.0	37.45	272.65	3,090.1	76.0	-1,639.5	1,641.2	0.00	0.00	
3,700.0	37.45	272.65	3,169.5	78.8	-1,700.2	1,702.0	0.00	0.00	
3,800.0	37.45	272.65	3,248.9	81.6	-1,760.9	1,762.8	0.00	0.00	
3,900.0	37.45	272.65	3,328.3	84.4	-1,821.7	1,823.6	0.00	0.00	
4,000.0	37.45	272.65	3,407.7	87.3	-1,882.4	1,884.4	0.00	0.00	
4,100.0	37.45	272.65	3,487.0	90.1	-1,943.2	1,945.3	0.00	0.00	
4,200.0	37.45	272.65	3,566.4	92.9	-2,003.9	2,006.1	0.00	0.00	
4,224.2	37.45	272.65	3,585.7	93.6	-2,018.6	2,020.8	0.00	0.00	Start Drop -3.00
4,300.0	35.18	272.65	3,646.7	95.7	-2,063.4	2,065.7	3.00	-3.00	
4,400.0	32.18	272.65	3,729.9	98.2	-2,118.8	2,121.1	3.00	-3.00	
4,484.0	29.66	272.65	3,802.0	100.2	-2,161.9	2,164.3	3.00	-3.00	OHIO_CREEK.MBL (SSTVD)
4,500.0	29.18	272.65	3,815.9	100.6	-2,169.8	2,172.1	3.00	-3.00	
4,600.0	26.18	272.65	3,904.5	102.7	-2,216.2	2,218.6	3.00	-3.00	
4,700.0	23.18	272.65	3,995.3	104.7	-2,257.9	2,260.3	3.00	-3.00	
4,800.0	20.18	272.65	4,088.2	106.4	-2,294.8	2,297.2	3.00	-3.00	

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Well:	CHEVRON 11D-17	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

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
4,802.9	20.09	272.65	4,091.0	106.4	-2,295.8	2,298.3	3.00	-3.00	WILLIAMS_FORK.MBL (SSTVD)
4,900.0	17.18	272.65	4,183.0	107.9	-2,326.8	2,329.3	3.00	-3.00	
5,000.0	14.18	272.65	4,279.2	109.1	-2,353.8	2,356.3	3.00	-3.00	
5,100.0	11.18	272.65	4,376.8	110.1	-2,375.7	2,378.2	3.00	-3.00	
5,200.0	8.18	272.65	4,475.4	110.9	-2,392.5	2,395.0	3.00	-3.00	
5,300.0	5.18	272.65	4,574.7	111.4	-2,404.1	2,406.7	3.00	-3.00	
5,400.0	2.18	272.65	4,674.4	111.7	-2,410.5	2,413.1	3.00	-3.00	
5,472.6	0.00	0.00	4,747.0	111.8	-2,411.9	2,414.5	3.00	-3.00	Start 2293.0 hold at 5472.6 MD
5,500.0	0.00	0.00	4,774.4	111.8	-2,411.9	2,414.5	0.00	0.00	
5,572.6	0.00	0.00	4,847.0	111.8	-2,411.9	2,414.5	0.00	0.00	TOP_GAS.MBL (SSTVD)
5,600.0	0.00	0.00	4,874.4	111.8	-2,411.9	2,414.5	0.00	0.00	
5,700.0	0.00	0.00	4,974.4	111.8	-2,411.9	2,414.5	0.00	0.00	
5,800.0	0.00	0.00	5,074.4	111.8	-2,411.9	2,414.5	0.00	0.00	
5,900.0	0.00	0.00	5,174.4	111.8	-2,411.9	2,414.5	0.00	0.00	
6,000.0	0.00	0.00	5,274.4	111.8	-2,411.9	2,414.5	0.00	0.00	
6,100.0	0.00	0.00	5,374.4	111.8	-2,411.9	2,414.5	0.00	0.00	
6,200.0	0.00	0.00	5,474.4	111.8	-2,411.9	2,414.5	0.00	0.00	
6,300.0	0.00	0.00	5,574.4	111.8	-2,411.9	2,414.5	0.00	0.00	
6,400.0	0.00	0.00	5,674.4	111.8	-2,411.9	2,414.5	0.00	0.00	
6,500.0	0.00	0.00	5,774.4	111.8	-2,411.9	2,414.5	0.00	0.00	
6,600.0	0.00	0.00	5,874.4	111.8	-2,411.9	2,414.5	0.00	0.00	
6,700.0	0.00	0.00	5,974.4	111.8	-2,411.9	2,414.5	0.00	0.00	
6,800.0	0.00	0.00	6,074.4	111.8	-2,411.9	2,414.5	0.00	0.00	
6,900.0	0.00	0.00	6,174.4	111.8	-2,411.9	2,414.5	0.00	0.00	
7,000.0	0.00	0.00	6,274.4	111.8	-2,411.9	2,414.5	0.00	0.00	
7,100.0	0.00	0.00	6,374.4	111.8	-2,411.9	2,414.5	0.00	0.00	
7,145.6	0.00	0.00	6,420.0	111.8	-2,411.9	2,414.5	0.00	0.00	CAMEO.MBL (SSTVD)
7,200.0	0.00	0.00	6,474.4	111.8	-2,411.9	2,414.5	0.00	0.00	
7,300.0	0.00	0.00	6,574.4	111.8	-2,411.9	2,414.5	0.00	0.00	
7,400.0	0.00	0.00	6,674.4	111.8	-2,411.9	2,414.5	0.00	0.00	
7,500.0	0.00	0.00	6,774.4	111.8	-2,411.9	2,414.5	0.00	0.00	
7,600.0	0.00	0.00	6,874.4	111.8	-2,411.9	2,414.5	0.00	0.00	
7,615.6	0.00	0.00	6,890.0	111.8	-2,411.9	2,414.5	0.00	0.00	ROLLINS.MBL (SSTVD)
7,700.0	0.00	0.00	6,974.4	111.8	-2,411.9	2,414.5	0.00	0.00	
7,765.6	0.00	0.00	7,040.0	111.8	-2,411.9	2,414.5	0.00	0.00	TD at 7765.6 - TD.MBL (SSTVD)

Targets									
Target Name									
- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- Shape									
CHEVRON 11D-17 PBH	0.00	0.00	7,040.0	111.8	-2,411.9	14,367,210.00	2,447,613.00	39.528524	-108.137574
- plan hits target center									
- Circle (radius 50.0)									

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well CHEVRON 11D-17
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Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 5613.0usft
Site:	S17-T6S-R96W (PC5A)	North Reference:	True
Well:	CHEVRON 11D-17	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1		

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,484.0	3,802.0	OHIO_CREEK.MBL (SSTVD)		0.00	
4,802.9	4,091.0	WILLIAMS_FORK.MBL (SSTVD)		0.00	
5,572.6	4,847.0	TOP_GAS.MBL (SSTVD)		0.00	
7,145.6	6,420.0	CAMEO.MBL (SSTVD)		0.00	
7,615.6	6,890.0	ROLLINS.MBL (SSTVD)		0.00	
7,765.6	7,040.0	TD.MBL (SSTVD)		0.00	

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
300.0	300.0	0.0	0.0	Start Build 3.00
1,548.3	1,461.3	18.2	-393.2	Start 2675.9 hold at 1548.3 MD
4,224.2	3,585.7	93.6	-2,018.6	Start Drop -3.00
5,472.6	4,747.0	111.8	-2,411.9	Start 2293.0 hold at 5472.6 MD
7,765.6	7,040.0	111.8	-2,411.9	TD at 7765.6