

Planning Report

Database:	USA EDM 5000 Multi Users DB	Local Co-ordinate Reference:	Well 26K SWD
Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 8994.0usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 8994.0usft
Site:	S26-T6S-R95W (26K)	North Reference:	True
Well:	26K SWD	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		S26-T6S-R95W (26K)			
Site Position:		Northing:	14,324,088.50 usft	Latitude:	39.405864
From:	Map	Easting:	2,496,462.30 usft	Longitude:	-107.969708
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	1.92 °

Well	26K SWD					
Well Position	+N/-S	0.0 usft	Northing:	14,324,089.70 usft	Latitude:	39.405870
	+E/-W	0.0 usft	Easting:	2,496,437.70 usft	Longitude:	-107.969795
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	8,964.0 usft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	11/6/2015	9.47	65.63	51,905

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	279.13

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	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
614.7	4.29	279.13	614.5	1.3	-7.9	2.00	2.00	0.00	279.13	
6,447.0	4.29	279.13	6,430.5	70.6	-439.2	0.00	0.00	0.00	0.00	
6,661.8	0.00	0.00	6,645.0	71.9	-447.1	2.00	-2.00	0.00	180.00	
10,661.8	0.00	0.00	10,645.0	71.9	-447.1	0.00	0.00	0.00	0.00	26K SWD PBHL

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Site:	S26-T6S-R95W (26K)	North Reference:	True
Well:	26K SWD	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	
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	Start Build 2.00
500.0	2.00	279.13	500.0	0.3	-1.7	1.7	2.00	2.00	
600.0	4.00	279.13	599.8	1.1	-6.9	7.0	2.00	2.00	
614.7	4.29	279.13	614.5	1.3	-7.9	8.0	2.00	2.00	Start 5832.3 hold at 614.7 MD
700.0	4.29	279.13	699.6	2.3	-14.2	14.4	0.00	0.00	
800.0	4.29	279.13	799.3	3.5	-21.6	21.9	0.00	0.00	
900.0	4.29	279.13	899.0	4.7	-29.0	29.4	0.00	0.00	
1,000.0	4.29	279.13	998.7	5.9	-36.4	36.9	0.00	0.00	
1,100.0	4.29	279.13	1,098.4	7.0	-43.8	44.4	0.00	0.00	
1,200.0	4.29	279.13	1,198.2	8.2	-51.2	51.9	0.00	0.00	
1,300.0	4.29	279.13	1,297.9	9.4	-58.6	59.4	0.00	0.00	
1,400.0	4.29	279.13	1,397.6	10.6	-66.0	66.9	0.00	0.00	
1,500.0	4.29	279.13	1,497.3	11.8	-73.4	74.3	0.00	0.00	
1,600.0	4.29	279.13	1,597.0	13.0	-80.8	81.8	0.00	0.00	
1,700.0	4.29	279.13	1,696.8	14.2	-88.2	89.3	0.00	0.00	
1,800.0	4.29	279.13	1,796.5	15.4	-95.6	96.8	0.00	0.00	
1,900.0	4.29	279.13	1,896.2	16.5	-103.0	104.3	0.00	0.00	
2,000.0	4.29	279.13	1,995.9	17.7	-110.4	111.8	0.00	0.00	
2,100.0	4.29	279.13	2,095.6	18.9	-117.8	119.3	0.00	0.00	
2,200.0	4.29	279.13	2,195.3	20.1	-125.2	126.8	0.00	0.00	
2,300.0	4.29	279.13	2,295.1	21.3	-132.6	134.3	0.00	0.00	
2,400.0	4.29	279.13	2,394.8	22.5	-139.9	141.7	0.00	0.00	
2,500.0	4.29	279.13	2,494.5	23.7	-147.3	149.2	0.00	0.00	
2,600.0	4.29	279.13	2,594.2	24.9	-154.7	156.7	0.00	0.00	
2,700.0	4.29	279.13	2,693.9	26.1	-162.1	164.2	0.00	0.00	
2,800.0	4.29	279.13	2,793.7	27.2	-169.5	171.7	0.00	0.00	
2,900.0	4.29	279.13	2,893.4	28.4	-176.9	179.2	0.00	0.00	
3,000.0	4.29	279.13	2,993.1	29.6	-184.3	186.7	0.00	0.00	
3,100.0	4.29	279.13	3,092.8	30.8	-191.7	194.2	0.00	0.00	
3,200.0	4.29	279.13	3,192.5	32.0	-199.1	201.7	0.00	0.00	
3,300.0	4.29	279.13	3,292.3	33.2	-206.5	209.1	0.00	0.00	
3,400.0	4.29	279.13	3,392.0	34.4	-213.9	216.6	0.00	0.00	
3,500.0	4.29	279.13	3,491.7	35.6	-221.3	224.1	0.00	0.00	
3,600.0	4.29	279.13	3,591.4	36.8	-228.7	231.6	0.00	0.00	
3,700.0	4.29	279.13	3,691.1	37.9	-236.1	239.1	0.00	0.00	
3,800.0	4.29	279.13	3,790.9	39.1	-243.5	246.6	0.00	0.00	
3,900.0	4.29	279.13	3,890.6	40.3	-250.9	254.1	0.00	0.00	
4,000.0	4.29	279.13	3,990.3	41.5	-258.3	261.6	0.00	0.00	
4,100.0	4.29	279.13	4,090.0	42.7	-265.7	269.1	0.00	0.00	
4,200.0	4.29	279.13	4,189.7	43.9	-273.0	276.5	0.00	0.00	
4,300.0	4.29	279.13	4,289.4	45.1	-280.4	284.0	0.00	0.00	
4,400.0	4.29	279.13	4,389.2	46.3	-287.8	291.5	0.00	0.00	
4,500.0	4.29	279.13	4,488.9	47.4	-295.2	299.0	0.00	0.00	
4,600.0	4.29	279.13	4,588.6	48.6	-302.6	306.5	0.00	0.00	
4,700.0	4.29	279.13	4,688.3	49.8	-310.0	314.0	0.00	0.00	
4,800.0	4.29	279.13	4,788.0	51.0	-317.4	321.5	0.00	0.00	
4,900.0	4.29	279.13	4,887.8	52.2	-324.8	329.0	0.00	0.00	
5,000.0	4.29	279.13	4,987.5	53.4	-332.2	336.5	0.00	0.00	

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Site:	S26-T6S-R95W (26K)	North Reference:	True
Well:	26K SWD	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
5,100.0	4.29	279.13	5,087.2	54.6	-339.6	344.0	0.00	0.00	
5,200.0	4.29	279.13	5,186.9	55.8	-347.0	351.4	0.00	0.00	
5,300.0	4.29	279.13	5,286.6	57.0	-354.4	358.9	0.00	0.00	
5,400.0	4.29	279.13	5,386.4	58.1	-361.8	366.4	0.00	0.00	
5,500.0	4.29	279.13	5,486.1	59.3	-369.2	373.9	0.00	0.00	
5,600.0	4.29	279.13	5,585.8	60.5	-376.6	381.4	0.00	0.00	
5,700.0	4.29	279.13	5,685.5	61.7	-384.0	388.9	0.00	0.00	
5,800.0	4.29	279.13	5,785.2	62.9	-391.4	396.4	0.00	0.00	
5,900.0	4.29	279.13	5,885.0	64.1	-398.7	403.9	0.00	0.00	
6,000.0	4.29	279.13	5,984.7	65.3	-406.1	411.4	0.00	0.00	
6,100.0	4.29	279.13	6,084.4	66.5	-413.5	418.8	0.00	0.00	
6,200.0	4.29	279.13	6,184.1	67.6	-420.9	426.3	0.00	0.00	
6,300.0	4.29	279.13	6,283.8	68.8	-428.3	433.8	0.00	0.00	
6,400.0	4.29	279.13	6,383.6	70.0	-435.7	441.3	0.00	0.00	
6,447.0	4.29	279.13	6,430.5	70.6	-439.2	444.8	0.00	0.00	Start Drop -2.00
6,500.0	3.24	279.13	6,483.3	71.1	-442.6	448.3	2.00	-2.00	
6,600.0	1.24	279.13	6,583.2	71.8	-446.5	452.2	2.00	-2.00	
6,661.8	0.00	0.00	6,645.0	71.9	-447.1	452.9	2.00	-2.00	Start 4000.0 hold at 6661.8 MD
6,700.0	0.00	0.00	6,683.2	71.9	-447.1	452.9	0.00	0.00	
6,800.0	0.00	0.00	6,783.2	71.9	-447.1	452.9	0.00	0.00	
6,900.0	0.00	0.00	6,883.2	71.9	-447.1	452.9	0.00	0.00	
6,954.8	0.00	0.00	6,938.0	71.9	-447.1	452.9	0.00	0.00	OHIO_CREEK.MBL (SSTVD)
7,000.0	0.00	0.00	6,983.2	71.9	-447.1	452.9	0.00	0.00	
7,100.0	0.00	0.00	7,083.2	71.9	-447.1	452.9	0.00	0.00	
7,200.0	0.00	0.00	7,183.2	71.9	-447.1	452.9	0.00	0.00	
7,297.8	0.00	0.00	7,281.0	71.9	-447.1	452.9	0.00	0.00	WILLIAMS_FORK.MBL (SSTVD)
7,300.0	0.00	0.00	7,283.2	71.9	-447.1	452.9	0.00	0.00	
7,400.0	0.00	0.00	7,383.2	71.9	-447.1	452.9	0.00	0.00	
7,500.0	0.00	0.00	7,483.2	71.9	-447.1	452.9	0.00	0.00	
7,600.0	0.00	0.00	7,583.2	71.9	-447.1	452.9	0.00	0.00	
7,700.0	0.00	0.00	7,683.2	71.9	-447.1	452.9	0.00	0.00	
7,800.0	0.00	0.00	7,783.2	71.9	-447.1	452.9	0.00	0.00	
7,900.0	0.00	0.00	7,883.2	71.9	-447.1	452.9	0.00	0.00	
8,000.0	0.00	0.00	7,983.2	71.9	-447.1	452.9	0.00	0.00	
8,031.8	0.00	0.00	8,015.0	71.9	-447.1	452.9	0.00	0.00	TOP_GAS.MBL (SSTVD)
8,100.0	0.00	0.00	8,083.2	71.9	-447.1	452.9	0.00	0.00	
8,200.0	0.00	0.00	8,183.2	71.9	-447.1	452.9	0.00	0.00	
8,300.0	0.00	0.00	8,283.2	71.9	-447.1	452.9	0.00	0.00	
8,400.0	0.00	0.00	8,383.2	71.9	-447.1	452.9	0.00	0.00	
8,500.0	0.00	0.00	8,483.2	71.9	-447.1	452.9	0.00	0.00	
8,600.0	0.00	0.00	8,583.2	71.9	-447.1	452.9	0.00	0.00	
8,700.0	0.00	0.00	8,683.2	71.9	-447.1	452.9	0.00	0.00	
8,800.0	0.00	0.00	8,783.2	71.9	-447.1	452.9	0.00	0.00	
8,900.0	0.00	0.00	8,883.2	71.9	-447.1	452.9	0.00	0.00	
9,000.0	0.00	0.00	8,983.2	71.9	-447.1	452.9	0.00	0.00	
9,100.0	0.00	0.00	9,083.2	71.9	-447.1	452.9	0.00	0.00	
9,200.0	0.00	0.00	9,183.2	71.9	-447.1	452.9	0.00	0.00	
9,300.0	0.00	0.00	9,283.2	71.9	-447.1	452.9	0.00	0.00	
9,303.8	0.00	0.00	9,287.0	71.9	-447.1	452.9	0.00	0.00	CAMEO.MBL (SSTVD)
9,400.0	0.00	0.00	9,383.2	71.9	-447.1	452.9	0.00	0.00	
9,500.0	0.00	0.00	9,483.2	71.9	-447.1	452.9	0.00	0.00	
9,600.0	0.00	0.00	9,583.2	71.9	-447.1	452.9	0.00	0.00	

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Company:	Caerus Oil & Gas	TVD Reference:	30' KB @ 8994.0usft
Project:	Garfield County, CO (UTM 12N)	MD Reference:	30' KB @ 8994.0usft
Site:	S26-T6S-R95W (26K)	North Reference:	True
Well:	26K SWD	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
9,700.0	0.00	0.00	9,683.2	71.9	-447.1	452.9	0.00	0.00	
9,800.0	0.00	0.00	9,783.2	71.9	-447.1	452.9	0.00	0.00	
9,828.8	0.00	0.00	9,812.0	71.9	-447.1	452.9	0.00	0.00	ROLLINS.MBL (SSTVD)
9,900.0	0.00	0.00	9,883.2	71.9	-447.1	452.9	0.00	0.00	
10,000.0	0.00	0.00	9,983.2	71.9	-447.1	452.9	0.00	0.00	
10,100.0	0.00	0.00	10,083.2	71.9	-447.1	452.9	0.00	0.00	
10,158.8	0.00	0.00	10,142.0	71.9	-447.1	452.9	0.00	0.00	Cozzette
10,200.0	0.00	0.00	10,183.2	71.9	-447.1	452.9	0.00	0.00	
10,300.0	0.00	0.00	10,283.2	71.9	-447.1	452.9	0.00	0.00	
10,400.0	0.00	0.00	10,383.2	71.9	-447.1	452.9	0.00	0.00	
10,411.8	0.00	0.00	10,395.0	71.9	-447.1	452.9	0.00	0.00	Corcoran
10,500.0	0.00	0.00	10,483.2	71.9	-447.1	452.9	0.00	0.00	
10,600.0	0.00	0.00	10,583.2	71.9	-447.1	452.9	0.00	0.00	
10,661.8	0.00	0.00	10,645.0	71.9	-447.1	452.9	0.00	0.00	TD at 10661.8 - 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									
26K SWD PBHL	0.00	0.00	10,645.0	71.9	-447.1	14,324,146.50	2,495,988.40	39.406067	-107.971376
- plan hits target center									
- Circle (radius 50.0)									

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,954.8	6,938.0	OHIO_CREEK.MBL (SSTVD)		0.00	
7,297.8	7,281.0	WILLIAMS_FORK.MBL (SSTVD)		0.00	
8,031.8	8,015.0	TOP_GAS.MBL (SSTVD)		0.00	
9,303.8	9,287.0	CAMEO.MBL (SSTVD)		0.00	
9,828.8	9,812.0	ROLLINS.MBL (SSTVD)		0.00	
10,158.8	10,142.0	Cozzette		0.00	
10,411.8	10,395.0	Corcoran		0.00	
10,661.8	10,645.0	TD.MBL (SSTVD)		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
400.0	400.0	0.0	0.0	Start Build 2.00
614.7	614.5	1.3	-7.9	Start 5832.3 hold at 614.7 MD
6,447.0	6,430.5	70.6	-439.2	Start Drop -2.00
6,661.8	6,645.0	71.9	-447.1	Start 4000.0 hold at 6661.8 MD
10,661.8	10,645.0	71.9	-447.1	TD at 10661.8