



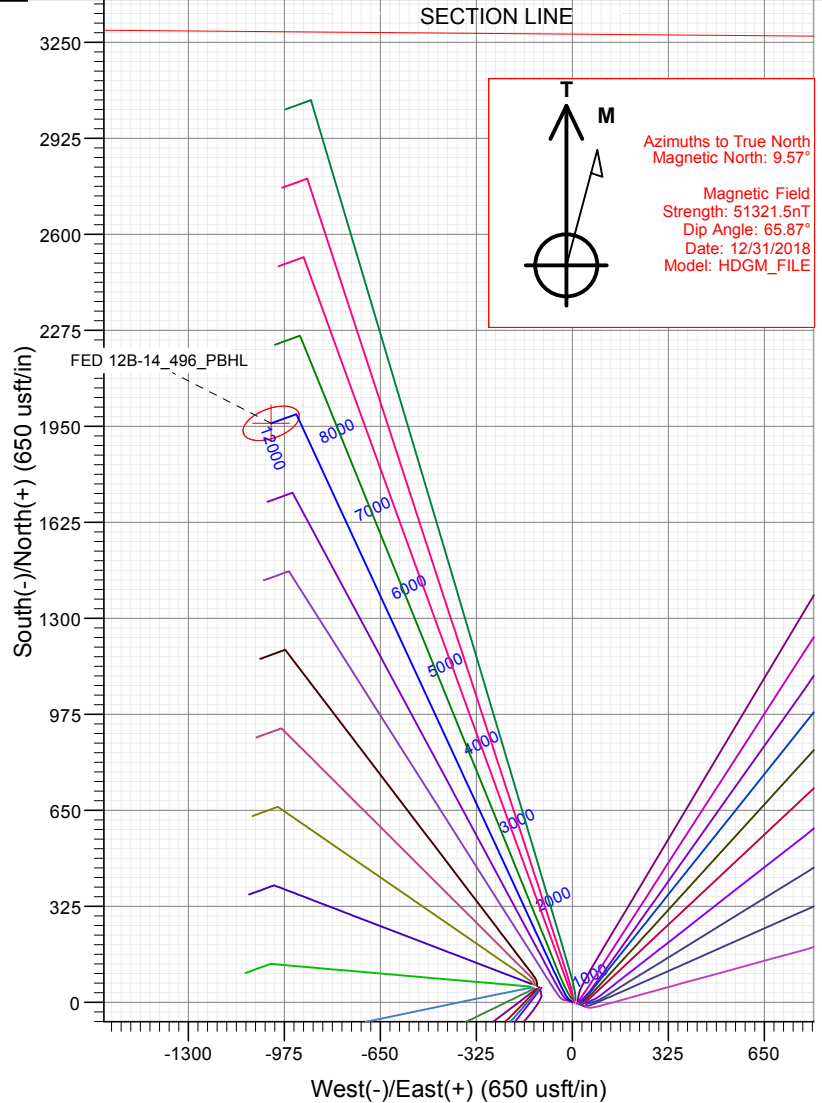
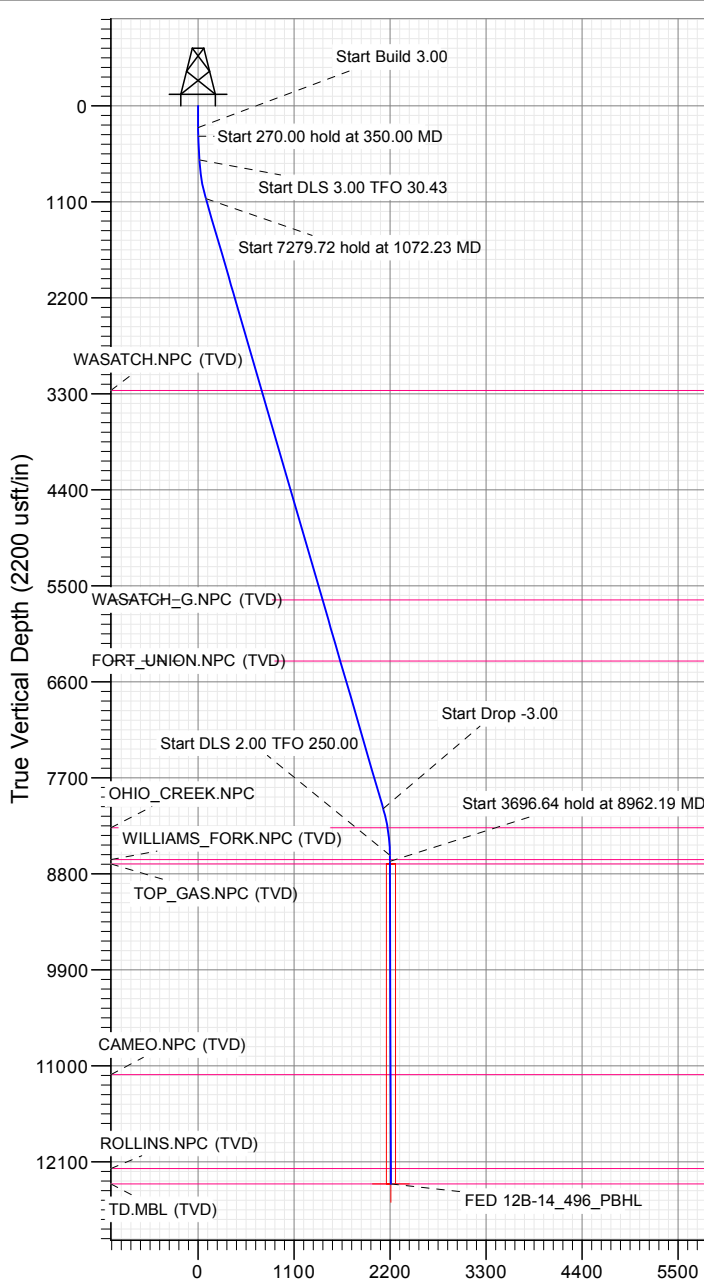
# SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	350.00	3.00	310.00	349.95	1.68	-2.01	3.00	310.00	2.42	
4	620.00	3.00	310.00	619.58	10.77	-12.83	0.00	0.00	15.47	
5	1072.23	16.22	335.17	1064.58	76.01	-48.59	3.00	30.43	89.86	
6	8351.95	16.22	335.17	8054.41	1921.79	-902.78	0.00	0.00	2121.53	
7	8892.73	0.00	0.00	8588.00	1990.82	-934.72	3.00	180.00	2197.50	
8	8962.19	1.39	250.00	8657.45	1990.53	-935.51	2.00	250.00	2197.61	
9	12658.83	1.39	250.00	12353.00	1959.87	-1019.72	0.00	0.00	2209.28	FED 12B-14_496_PBHL

PLAN #1  
FED 12B-14\_496  
GL +68 = 30' @ 7532.00usft  
Ground Level @ 7902.00  
NAD 1927 - Western US  
Well FED 12B-14\_496 - Slot ES\_3, True North

Type	Target	Origin	Type	N/S	E/W	From	TVD
TD	No Target (Freehand)	332.51	Slot	0.00	0.00	TVD	0.00
Name	FED 12B-14_496_PBHL	TVD	+N/-S	+E/-W	Latitude	Longitude	
		12353.00	1959.87	-1019.72	39.706204	-108.136697	

Project: Garfield County, CO (UTM 12N)  
Site: SEC 14-T4S-R96W ELU J14 496 PAD  
Well: FED 12B-14\_496  
Wellbore: OH  
Design: PLAN #1



## FORMATION TOP DETAILS

TVDPath	MDPath	Formation
3262.00	3360.78	WASATCH.NPC (TVD)
5662.00	5860.32	WASATCH.G.NPC (TVD)
6363.00	6590.39	FORT_UNION.NPC (TVD)
8271.00	8574.26	OHIO_CREEK.NPC
8638.00	8942.74	WILLIAMS_FORK.NPC (TVD)
8688.00	8992.75	TOP_GAS.NPC (TVD)
11101.00	11406.46	CAMEO.NPC (TVD)
12178.00	12483.77	ROLLINS.NPC (TVD)
12353.00	12658.83	TD.MBL (TVD)

## WELL DETAILS: FED 12B-14\_496

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	ES_3
0.00	0.00	14429975.10	2446034.40	39.700826	-108.136074	



## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well FED 12B-14_496 - Slot ES_3
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	GL + KB = 30' @ 7932.00usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	GL + KB = 30' @ 7932.00usft
<b>Site:</b>	SEC 14-T4S-R96W ELU J14 496 PAD	<b>North Reference:</b>	True
<b>Well:</b>	FED 12B-14_496	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

<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)		

Site		SEC 14-T4S-R96W ELU J14 496 PAD			
Site Position:		Northing:	14,430,033.00 usft	Latitude:	39.700997
From:	Map	Easting:	2,445,893.00 usft	Longitude:	-108.136570
Position Uncertainty:	3.28 usft	Slot Radius:	13-3/16 "	Grid Convergence:	1.83 °

Well	FED 12B-14_496 - Slot ES_3					
Well Position	+N/-S	0.00 usft	Northing:	14,429,975.10 usft	Latitude:	39.700826
	+E/-W	0.00 usft	Easting:	2,446,034.40 usft	Longitude:	-108.136074
Position Uncertainty		3.28 usft	Wellhead Elevation:	usft	Ground Level:	7,902.00 usft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM_FILE	12/31/2018	9.57	65.87	51,321.50000000

<b>Design</b>	PLAN #1			
<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) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	332.51

<b>Plan Sections</b>										
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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	
350.00	3.00	310.00	349.95	1.68	-2.01	3.00	3.00	0.00	310.00	
620.00	3.00	310.00	619.58	10.77	-12.83	0.00	0.00	0.00	0.00	
1,072.23	16.22	335.17	1,064.58	76.01	-48.59	3.00	2.92	5.56	30.43	
8,351.95	16.22	335.17	8,054.41	1,921.79	-902.78	0.00	0.00	0.00	0.00	
8,892.73	0.00	0.00	8,588.00	1,990.82	-934.72	3.00	-3.00	0.00	180.00	
8,962.19	1.39	250.00	8,657.45	1,990.53	-935.51	2.00	2.00	-158.38	250.00	
12,658.83	1.39	250.00	12,353.00	1,959.87	-1,019.72	0.00	0.00	0.00	0.00	FED 12B-14_496_PB

# Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well FED 12B-14_496 - Slot ES_3
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	GL + KB = 30' @ 7932.00usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	GL + KB = 30' @ 7932.00usft
<b>Site:</b>	SEC 14-T4S-R96W ELU J14 496 PAD	<b>North Reference:</b>	True
<b>Well:</b>	FED 12B-14_496	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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
0.00	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	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	Start Build 3.00
300.00	1.50	310.00	299.99	0.42	-0.50	0.60	3.00	3.00	
350.00	3.00	310.00	349.95	1.68	-2.01	2.42	3.00	3.00	Start 270.00 hold at 350.00 MD
400.00	3.00	310.00	399.89	3.36	-4.01	4.84	0.00	0.00	
500.00	3.00	310.00	499.75	6.73	-8.02	9.67	0.00	0.00	
600.00	3.00	310.00	599.61	10.09	-12.03	14.50	0.00	0.00	
620.00	3.00	310.00	619.58	10.77	-12.83	15.47	0.00	0.00	Start DLS 3.00 TFO 30.43
700.00	5.21	323.50	699.38	15.03	-16.60	21.00	3.00	2.77	
800.00	8.13	329.70	798.69	24.79	-22.87	32.55	3.00	2.92	
900.00	11.09	332.62	897.28	39.44	-30.86	49.23	3.00	2.96	
1,000.00	14.07	334.32	994.86	58.94	-40.55	71.00	3.00	2.98	
1,072.23	16.22	335.17	1,064.58	76.01	-48.59	89.86	3.00	2.98	Start 7279.72 hold at 1072.23 MD
1,100.00	16.22	335.17	1,091.25	83.05	-51.85	97.61	0.00	0.00	
1,200.00	16.22	335.17	1,187.26	108.41	-63.59	125.52	0.00	0.00	
1,300.00	16.22	335.17	1,283.28	133.76	-75.32	153.43	0.00	0.00	
1,400.00	16.22	335.17	1,379.30	159.12	-87.05	181.33	0.00	0.00	
1,500.00	16.22	335.17	1,475.32	184.47	-98.79	209.24	0.00	0.00	
1,600.00	16.22	335.17	1,571.33	209.83	-110.52	237.15	0.00	0.00	
1,700.00	16.22	335.17	1,667.35	235.18	-122.26	265.06	0.00	0.00	
1,800.00	16.22	335.17	1,763.37	260.54	-133.99	292.97	0.00	0.00	
1,900.00	16.22	335.17	1,859.39	285.89	-145.72	320.88	0.00	0.00	
2,000.00	16.22	335.17	1,955.41	311.25	-157.46	348.79	0.00	0.00	
2,100.00	16.22	335.17	2,051.42	336.60	-169.19	376.69	0.00	0.00	
2,200.00	16.22	335.17	2,147.44	361.96	-180.92	404.60	0.00	0.00	
2,300.00	16.22	335.17	2,243.46	387.31	-192.66	432.51	0.00	0.00	
2,400.00	16.22	335.17	2,339.48	412.67	-204.39	460.42	0.00	0.00	
2,500.00	16.22	335.17	2,435.50	438.02	-216.13	488.33	0.00	0.00	
2,600.00	16.22	335.17	2,531.51	463.38	-227.86	516.24	0.00	0.00	
2,700.00	16.22	335.17	2,627.53	488.73	-239.59	544.15	0.00	0.00	
2,800.00	16.22	335.17	2,723.55	514.09	-251.33	572.05	0.00	0.00	
2,900.00	16.22	335.17	2,819.57	539.44	-263.06	599.96	0.00	0.00	
3,000.00	16.22	335.17	2,915.59	564.80	-274.79	627.87	0.00	0.00	
3,100.00	16.22	335.17	3,011.60	590.15	-286.53	655.78	0.00	0.00	
3,200.00	16.22	335.17	3,107.62	615.51	-298.26	683.69	0.00	0.00	
3,300.00	16.22	335.17	3,203.64	640.86	-310.00	711.60	0.00	0.00	
3,360.78	16.22	335.17	3,262.00	656.28	-317.13	728.56	0.00	0.00	WASATCH.NPC (TVD)
3,400.00	16.22	335.17	3,299.66	666.22	-321.73	739.51	0.00	0.00	
3,500.00	16.22	335.17	3,395.67	691.57	-333.46	767.42	0.00	0.00	
3,600.00	16.22	335.17	3,491.69	716.93	-345.20	795.32	0.00	0.00	
3,700.00	16.22	335.17	3,587.71	742.29	-356.93	823.23	0.00	0.00	
3,800.00	16.22	335.17	3,683.73	767.64	-368.66	851.14	0.00	0.00	
3,900.00	16.22	335.17	3,779.75	793.00	-380.40	879.05	0.00	0.00	
4,000.00	16.22	335.17	3,875.76	818.35	-392.13	906.96	0.00	0.00	
4,100.00	16.22	335.17	3,971.78	843.71	-403.87	934.87	0.00	0.00	
4,200.00	16.22	335.17	4,067.80	869.06	-415.60	962.78	0.00	0.00	
4,300.00	16.22	335.17	4,163.82	894.42	-427.33	990.68	0.00	0.00	
4,400.00	16.22	335.17	4,259.84	919.77	-439.07	1,018.59	0.00	0.00	
4,500.00	16.22	335.17	4,355.85	945.13	-450.80	1,046.50	0.00	0.00	
4,600.00	16.22	335.17	4,451.87	970.48	-462.53	1,074.41	0.00	0.00	

# Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well FED 12B-14_496 - Slot ES_3
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	GL + KB = 30' @ 7932.00usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	GL + KB = 30' @ 7932.00usft
<b>Site:</b>	SEC 14-T4S-R96W ELU J14 496 PAD	<b>North Reference:</b>	True
<b>Well:</b>	FED 12B-14_496	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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
4,700.00	16.22	335.17	4,547.89	995.84	-474.27	1,102.32	0.00	0.00	
4,800.00	16.22	335.17	4,643.91	1,021.19	-486.00	1,130.23	0.00	0.00	
4,900.00	16.22	335.17	4,739.93	1,046.55	-497.74	1,158.14	0.00	0.00	
5,000.00	16.22	335.17	4,835.94	1,071.90	-509.47	1,186.04	0.00	0.00	
5,100.00	16.22	335.17	4,931.96	1,097.26	-521.20	1,213.95	0.00	0.00	
5,200.00	16.22	335.17	5,027.98	1,122.61	-532.94	1,241.86	0.00	0.00	
5,300.00	16.22	335.17	5,124.00	1,147.97	-544.67	1,269.77	0.00	0.00	
5,400.00	16.22	335.17	5,220.01	1,173.32	-556.40	1,297.68	0.00	0.00	
5,500.00	16.22	335.17	5,316.03	1,198.68	-568.14	1,325.59	0.00	0.00	
5,600.00	16.22	335.17	5,412.05	1,224.03	-579.87	1,353.50	0.00	0.00	
5,700.00	16.22	335.17	5,508.07	1,249.39	-591.61	1,381.41	0.00	0.00	
5,800.00	16.22	335.17	5,604.09	1,274.74	-603.34	1,409.31	0.00	0.00	
5,860.32	16.22	335.17	5,662.00	1,290.04	-610.42	1,426.15	0.00	0.00	WASATCH_G.NPC (TVD)
5,900.00	16.22	335.17	5,700.10	1,300.10	-615.07	1,437.22	0.00	0.00	
6,000.00	16.22	335.17	5,796.12	1,325.45	-626.81	1,465.13	0.00	0.00	
6,100.00	16.22	335.17	5,892.14	1,350.81	-638.54	1,493.04	0.00	0.00	
6,200.00	16.22	335.17	5,988.16	1,376.16	-650.27	1,520.95	0.00	0.00	
6,300.00	16.22	335.17	6,084.18	1,401.52	-662.01	1,548.86	0.00	0.00	
6,400.00	16.22	335.17	6,180.19	1,426.87	-673.74	1,576.77	0.00	0.00	
6,500.00	16.22	335.17	6,276.21	1,452.23	-685.48	1,604.67	0.00	0.00	
6,590.39	16.22	335.17	6,363.00	1,475.15	-696.08	1,629.90	0.00	0.00	FORT_UNION.NPC (TVD)
6,600.00	16.22	335.17	6,372.23	1,477.59	-697.21	1,632.58	0.00	0.00	
6,700.00	16.22	335.17	6,468.25	1,502.94	-708.94	1,660.49	0.00	0.00	
6,800.00	16.22	335.17	6,564.26	1,528.30	-720.68	1,688.40	0.00	0.00	
6,900.00	16.22	335.17	6,660.28	1,553.65	-732.41	1,716.31	0.00	0.00	
7,000.00	16.22	335.17	6,756.30	1,579.01	-744.14	1,744.22	0.00	0.00	
7,100.00	16.22	335.17	6,852.32	1,604.36	-755.88	1,772.13	0.00	0.00	
7,200.00	16.22	335.17	6,948.34	1,629.72	-767.61	1,800.04	0.00	0.00	
7,300.00	16.22	335.17	7,044.35	1,655.07	-779.35	1,827.94	0.00	0.00	
7,400.00	16.22	335.17	7,140.37	1,680.43	-791.08	1,855.85	0.00	0.00	
7,500.00	16.22	335.17	7,236.39	1,705.78	-802.81	1,883.76	0.00	0.00	
7,600.00	16.22	335.17	7,332.41	1,731.14	-814.55	1,911.67	0.00	0.00	
7,700.00	16.22	335.17	7,428.43	1,756.49	-826.28	1,939.58	0.00	0.00	
7,800.00	16.22	335.17	7,524.44	1,781.85	-838.01	1,967.49	0.00	0.00	
7,900.00	16.22	335.17	7,620.46	1,807.20	-849.75	1,995.40	0.00	0.00	
8,000.00	16.22	335.17	7,716.48	1,832.56	-861.48	2,023.30	0.00	0.00	
8,100.00	16.22	335.17	7,812.50	1,857.91	-873.22	2,051.21	0.00	0.00	
8,200.00	16.22	335.17	7,908.52	1,883.27	-884.95	2,079.12	0.00	0.00	
8,300.00	16.22	335.17	8,004.53	1,908.62	-896.68	2,107.03	0.00	0.00	
8,351.95	16.22	335.17	8,054.41	1,921.79	-902.78	2,121.53	0.00	0.00	Start Drop -3.00
8,400.00	14.78	335.17	8,100.71	1,933.45	-908.17	2,134.36	3.00	-3.00	
8,500.00	11.78	335.17	8,198.03	1,954.30	-917.82	2,157.30	3.00	-3.00	
8,574.26	9.55	335.17	8,271.00	1,966.77	-923.59	2,171.04	3.00	-3.00	OHIO_CREEK.NPC
8,600.00	8.78	335.17	8,296.41	1,970.50	-925.32	2,175.13	3.00	-3.00	
8,700.00	5.78	335.17	8,395.59	1,982.00	-930.64	2,187.79	3.00	-3.00	
8,800.00	2.78	335.17	8,495.30	1,988.77	-933.77	2,195.25	3.00	-3.00	
8,892.73	0.00	0.00	8,588.00	1,990.82	-934.72	2,197.50	3.00	-3.00	Start DLS 2.00 TFO 250.00
8,900.00	0.15	250.00	8,595.27	1,990.81	-934.73	2,197.50	2.00	2.00	
8,942.74	1.00	250.00	8,638.00	1,990.67	-935.13	2,197.56	2.00	2.00	WILLIAMS_FORK.NPC (TVD)
8,962.19	1.39	250.00	8,657.45	1,990.53	-935.51	2,197.61	2.00	2.00	Start 3696.64 hold at 8962.19 MD
8,992.75	1.39	250.00	8,688.00	1,990.27	-936.21	2,197.71	0.00	0.00	TOP_GAS.NPC (TVD)
9,000.00	1.39	250.00	8,695.25	1,990.21	-936.37	2,197.73	0.00	0.00	

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well FED 12B-14_496 - Slot ES_3
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	GL + KB = 30' @ 7932.00usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	GL + KB = 30' @ 7932.00usft
<b>Site:</b>	SEC 14-T4S-R96W ELU J14 496 PAD	<b>North Reference:</b>	True
<b>Well:</b>	FED 12B-14_496	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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
9,100.00	1.39	250.00	8,795.22	1,989.38	-938.65	2,198.04	0.00	0.00	
9,200.00	1.39	250.00	8,895.19	1,988.55	-940.93	2,198.36	0.00	0.00	
9,300.00	1.39	250.00	8,995.16	1,987.73	-943.21	2,198.68	0.00	0.00	
9,400.00	1.39	250.00	9,095.13	1,986.90	-945.48	2,198.99	0.00	0.00	
9,500.00	1.39	250.00	9,195.10	1,986.07	-947.76	2,199.31	0.00	0.00	
9,600.00	1.39	250.00	9,295.07	1,985.24	-950.04	2,199.62	0.00	0.00	
9,700.00	1.39	250.00	9,395.04	1,984.41	-952.32	2,199.94	0.00	0.00	
9,800.00	1.39	250.00	9,495.01	1,983.58	-954.60	2,200.25	0.00	0.00	
9,900.00	1.39	250.00	9,594.98	1,982.75	-956.87	2,200.57	0.00	0.00	
10,000.00	1.39	250.00	9,694.96	1,981.92	-959.15	2,200.89	0.00	0.00	
10,100.00	1.39	250.00	9,794.93	1,981.09	-961.43	2,201.20	0.00	0.00	
10,200.00	1.39	250.00	9,894.90	1,980.26	-963.71	2,201.52	0.00	0.00	
10,300.00	1.39	250.00	9,994.87	1,979.43	-965.99	2,201.83	0.00	0.00	
10,400.00	1.39	250.00	10,094.84	1,978.60	-968.26	2,202.15	0.00	0.00	
10,500.00	1.39	250.00	10,194.81	1,977.77	-970.54	2,202.46	0.00	0.00	
10,600.00	1.39	250.00	10,294.78	1,976.95	-972.82	2,202.78	0.00	0.00	
10,700.00	1.39	250.00	10,394.75	1,976.12	-975.10	2,203.10	0.00	0.00	
10,800.00	1.39	250.00	10,494.72	1,975.29	-977.38	2,203.41	0.00	0.00	
10,900.00	1.39	250.00	10,594.69	1,974.46	-979.65	2,203.73	0.00	0.00	
11,000.00	1.39	250.00	10,694.66	1,973.63	-981.93	2,204.04	0.00	0.00	
11,100.00	1.39	250.00	10,794.63	1,972.80	-984.21	2,204.36	0.00	0.00	
11,200.00	1.39	250.00	10,894.60	1,971.97	-986.49	2,204.67	0.00	0.00	
11,300.00	1.39	250.00	10,994.57	1,971.14	-988.77	2,204.99	0.00	0.00	
11,400.00	1.39	250.00	11,094.54	1,970.31	-991.04	2,205.31	0.00	0.00	
11,406.46	1.39	250.00	11,101.00	1,970.26	-991.19	2,205.33	0.00	0.00	CAMEO.NPC (TVD)
11,500.00	1.39	250.00	11,194.51	1,969.48	-993.32	2,205.62	0.00	0.00	
11,600.00	1.39	250.00	11,294.48	1,968.65	-995.60	2,205.94	0.00	0.00	
11,700.00	1.39	250.00	11,394.46	1,967.82	-997.88	2,206.25	0.00	0.00	
11,800.00	1.39	250.00	11,494.43	1,966.99	-1,000.15	2,206.57	0.00	0.00	
11,900.00	1.39	250.00	11,594.40	1,966.16	-1,002.43	2,206.89	0.00	0.00	
12,000.00	1.39	250.00	11,694.37	1,965.34	-1,004.71	2,207.20	0.00	0.00	
12,100.00	1.39	250.00	11,794.34	1,964.51	-1,006.99	2,207.52	0.00	0.00	
12,200.00	1.39	250.00	11,894.31	1,963.68	-1,009.27	2,207.83	0.00	0.00	
12,300.00	1.39	250.00	11,994.28	1,962.85	-1,011.54	2,208.15	0.00	0.00	
12,400.00	1.39	250.00	12,094.25	1,962.02	-1,013.82	2,208.46	0.00	0.00	
12,483.77	1.39	250.00	12,178.00	1,961.32	-1,015.73	2,208.73	0.00	0.00	ROLLINS.NPC (TVD)
12,500.00	1.39	250.00	12,194.22	1,961.19	-1,016.10	2,208.78	0.00	0.00	
12,600.00	1.39	250.00	12,294.19	1,960.36	-1,018.38	2,209.10	0.00	0.00	
12,658.83	1.39	250.00	12,353.00	1,959.87	-1,019.72	2,209.28	0.00	0.00	TD at 12658.83 - TD.MBL (TVD) - FED 12B-14_

Targets									
Target Name									
- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
FED 12B-14_496_PBHL	0.00	0.00	12,353.00	1,959.87	-1,019.72	14,431,901.40	2,444,952.60	39.706204	-108.139697
- plan hits target center									
- Ellipse (radii L100.00 W50.00 on 250.00 azi)									

## Planning Report

<b>Database:</b>	USA EDM 5000 Multi Users DB	<b>Local Co-ordinate Reference:</b>	Well FED 12B-14_496 - Slot ES_3
<b>Company:</b>	Caerus Oil & Gas	<b>TVD Reference:</b>	GL + KB = 30' @ 7932.00usft
<b>Project:</b>	Garfield County, CO (UTM 12N)	<b>MD Reference:</b>	GL + KB = 30' @ 7932.00usft
<b>Site:</b>	SEC 14-T4S-R96W ELU J14 496 PAD	<b>North Reference:</b>	True
<b>Well:</b>	FED 12B-14_496	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,360.78	3,262.00	WASATCH.NPC (TVD)				
5,860.32	5,662.00	WASATCH_G.NPC (TVD)				
6,590.39	6,363.00	FORT_UNION.NPC (TVD)				
8,574.26	8,271.00	OHIO_CREEK.NPC				
8,942.74	8,638.00	WILLIAMS_FORK.NPC (TVD)				
8,992.75	8,688.00	TOP_GAS.NPC (TVD)				
11,406.46	11,101.00	CAMEO.NPC (TVD)				
12,483.77	12,178.00	ROLLINS.NPC (TVD)				
12,658.83	12,353.00	TD.MBL (TVD)				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
250.00	250.00	0.00	0.00	Start Build 3.00	
350.00	349.95	1.68	-2.01	Start 270.00 hold at 350.00 MD	
620.00	619.58	10.77	-12.83	Start DLS 3.00 TFO 30.43	
1,072.23	1,064.58	76.01	-48.59	Start 7279.72 hold at 1072.23 MD	
8,351.95	8,054.41	1,921.79	-902.78	Start Drop -3.00	
8,892.73	8,588.00	1,990.82	-934.72	Start DLS 2.00 TFO 250.00	
8,962.19	8,657.45	1,990.53	-935.51	Start 3696.64 hold at 8962.19 MD	
12,658.83	12,353.00	1,959.87	-1,019.72	TD at 12658.83	