

GREAT WESTERN OPERATING COMPANY

**ADAMS COUNTY
SEC 21-T1S-R67W
GUS LD 15-032HC**

OWB

Plan: PROPOSAL 1

Standard Planning Report

22 September, 2021

Project: ADAMS COUNTY
Site: SEC 21-T1S-R67W
Well: GUS LD 15-032HC
Wellbore: OWB
Design: PROPOSAL 1

PROJECT DETAILS: ADAMS COUNTY
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Northern Zone
System Datum: Mean Sea Level



Azimuths to True North
Magnetic North: 7.84°
Magnetic Field
Strength: 51675.8nT
Dip Angle: 66.27°
Date: 9/21/2021
Model: IGRF2020

WELL DETAILS: GUS LD 15-032HC

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1226284.87	3172146.59	39.952898°N	104.885947°W	

FORMATION TOP DETAILS

No formation data is available

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	
2 803.00	0.00	0.00	803.00	0.00	0.00	0.00	0.00	0.00	
3 1803.11	30.00	117.02	1758.03	-116.26	228.00	3.00	117.02	0.59	
4 8009.12	30.00	117.02	7132.39	-1526.01	2992.64	0.00	0.00	7.68	
5 9298.29	90.00	359.99	7914.00	-828.48	3394.56	8.00	-113.83	811.75	GUS 15-032HC-LP
6 16643.12	90.00	359.99	7914.00	6516.35	3393.27	0.00	0.00	7346.77	GUS 15-032HC-BTM PERF
7 16651.37	90.00	359.83	7914.00	6524.59	3393.26	2.00	-90.00	7354.10	GUS 15-032HC-PBHL
8 16743.30	90.00	359.83	7914.00	6616.52	3392.98	0.00	0.00	7435.77	GUS 15-032HC-PBHL

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
803.00	0.00	0.00	803.00	0.00	0.00	0.00	0.00	Start Build 3.00
1803.11	30.00	117.02	1758.03	-116.26	228.00	0.59	255.93	Start 6206.00 hold at 1803.11 MD
8009.12	30.00	117.02	7132.39	-1526.01	2992.64	7.68	3359.26	Start DLS 8.00 TFO -113.83
9298.29	90.00	359.99	7914.00	-828.48	3394.56	811.75	4285.51	TPZ- 9298.29/7914' MD/TVD, 2564' FNL, 2355' FEL SEC 22
16643.12	90.00	359.99	7914.00	6516.35	3393.27	7346.77	11630.33	BTM PERF - 16643.12/7914' MD/TVD, 470' FNL, 2355' FEL SEC 15
16651.37	90.00	359.83	7914.00	6524.59	3393.26	7354.10	11638.58	Start 91.93 hold at 16651.37 MD
16743.30	90.00	359.83	7914.00	6616.52	3392.98	7435.77	11730.51	BHL - 16743.30/7914' MD/TVD, 370' FNL, 2355' FEL SEC 15

DESIGN TARGET DETAILS

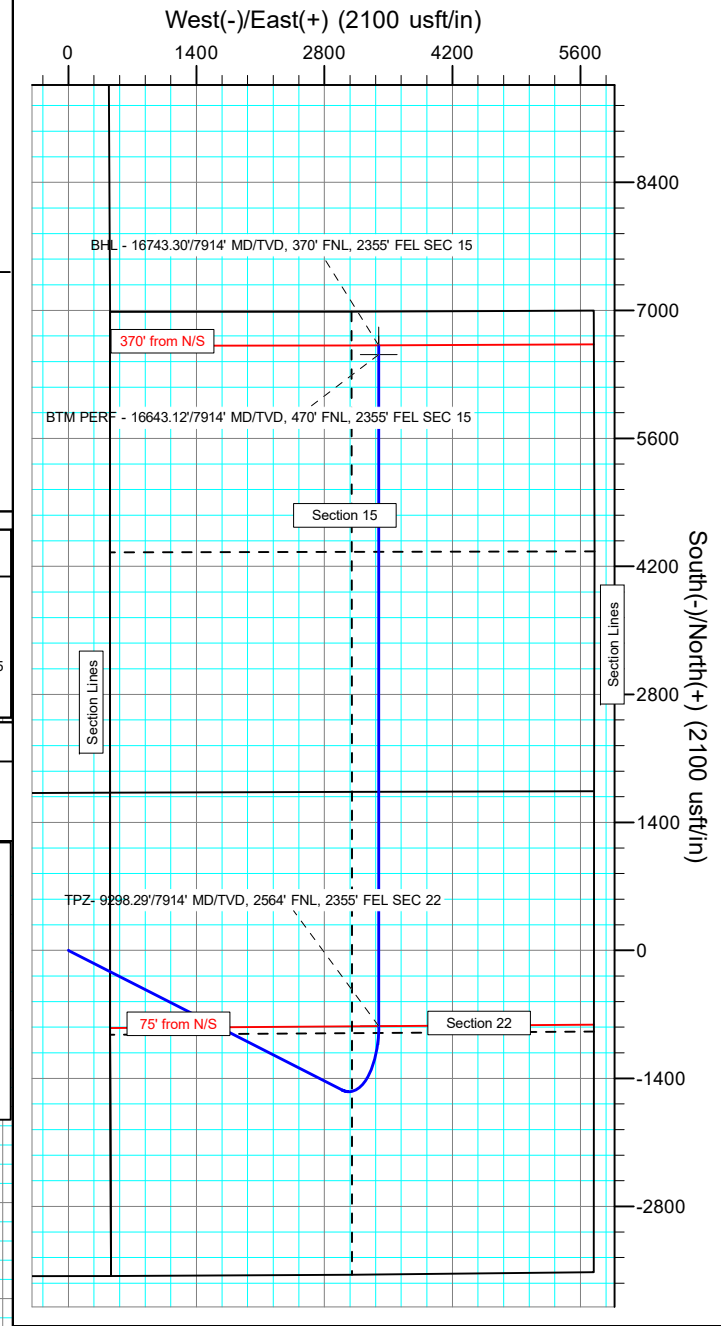
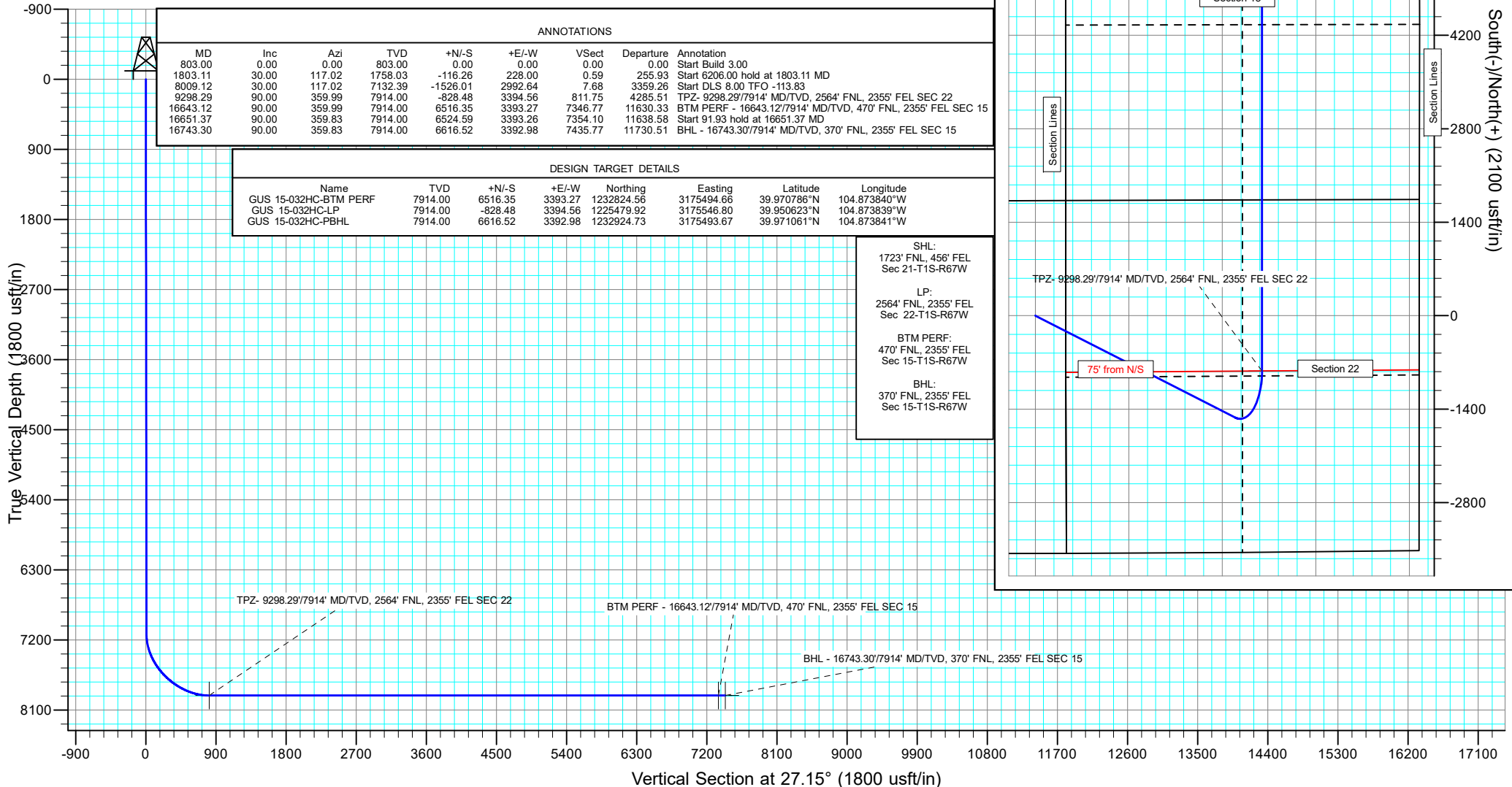
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
GUS 15-032HC-BTM PERF	7914.00	6516.35	3393.27	1232824.56	3175494.66	39.970786°N	104.873840°W
GUS 15-032HC-LP	7914.00	-828.48	3394.56	1225479.92	3175546.80	39.950623°N	104.873839°W
GUS 15-032HC-PBHL	7914.00	6616.52	3392.98	1232924.73	3175493.67	39.971061°N	104.873841°W

SHL:
1723' FNL, 456' FEL
Sec 21-T1S-R67W

LP:
2564' FNL, 2355' FEL
Sec 22-T1S-R67W

BTM PERF:
470' FNL, 2355' FEL
Sec 15-T1S-R67W

BHL:
370' FNL, 2355' FEL
Sec 15-T1S-R67W



Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well GUS LD 15-032HC
Company:	GREAT WESTERN OPERATING COMPANY	TVD Reference:	KB 20' @ 5144.00usft
Project:	ADAMS COUNTY	MD Reference:	KB 20' @ 5144.00usft
Site:	SEC 21-T1S-R67W	North Reference:	True
Well:	GUS LD 15-032HC	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

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

Site		SEC 21-T1S-R67W				
Site Position:		Northing:	1,228,012.10	usft	Latitude:	39.957631°N
From:	Lat/Long	Easting:	3,172,590.18	usft	Longitude:	104.884322°W
Position Uncertainty:		0.00	usft	Slot Radius:	13.200	in

Well		GUS LD 15-032HC				
Well Position	+N/-S	0.00 usft	Northing:	1,226,284.87 usft	Latitude:	39.952898°N
	+E/-W	0.00 usft	Easting:	3,172,146.59 usft	Longitude:	104.885947°W
Position Uncertainty		0.00 usft	Wellhead Elevation:	usft	Ground Level:	5,124.00 usft
Grid Convergence:		0.40 °				

Wellbore	OWB				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	9/21/2021	7.84	66.27	51,675.82522251

Design	PROPOSAL 1				
Audit Notes:					
Version:		Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	27.15	

Plan Survey Tool Program	Date	9/22/2021			
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	16,743.30 PROPOSAL 1 (OWB)	MWD		
			OWSG MWD - Standard		

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
803.00	0.00	0.00	803.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,803.11	30.00	117.02	1,758.03	-116.26	228.00	3.00	3.00	0.00	117.02	
8,009.12	30.00	117.02	7,132.39	-1,526.01	2,992.64	0.00	0.00	0.00	0.00	
9,298.29	90.00	359.99	7,914.00	-828.48	3,394.56	8.00	4.65	-9.08	-113.83	GUS 15-032HC-LP
16,643.12	90.00	359.99	7,914.00	6,516.35	3,393.27	0.00	0.00	0.00	0.00	GUS 15-032HC-BTM
16,651.37	90.00	359.83	7,914.00	6,524.59	3,393.26	2.00	0.00	-2.00	-90.00	GUS 15-032HC-PBHI
16,743.30	90.00	359.83	7,914.00	6,616.52	3,392.98	0.00	0.00	0.00	0.00	GUS 15-032HC-PBHI

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well GUS LD 15-032HC
Company:	GREAT WESTERN OPERATING COMPANY	TVD Reference:	KB 20' @ 5144.00usft
Project:	ADAMS COUNTY	MD Reference:	KB 20' @ 5144.00usft
Site:	SEC 21-T1S-R67W	North Reference:	True
Well:	GUS LD 15-032HC	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
803.00	0.00	0.00	803.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 3.00									
900.00	2.91	117.02	899.96	-1.12	2.19	0.01	3.00	3.00	0.00
1,000.00	5.91	117.02	999.65	-4.61	9.04	0.02	3.00	3.00	0.00
1,100.00	8.91	117.02	1,098.80	-10.47	20.53	0.05	3.00	3.00	0.00
1,200.00	11.91	117.02	1,197.15	-18.68	36.63	0.09	3.00	3.00	0.00
1,300.00	14.91	117.02	1,294.41	-29.21	57.29	0.15	3.00	3.00	0.00
1,400.00	17.91	117.02	1,390.33	-42.04	82.45	0.21	3.00	3.00	0.00
1,500.00	20.91	117.02	1,484.63	-57.14	112.05	0.29	3.00	3.00	0.00
1,600.00	23.91	117.02	1,577.07	-74.45	146.01	0.37	3.00	3.00	0.00
1,700.00	26.91	117.02	1,667.38	-93.94	184.23	0.47	3.00	3.00	0.00
1,803.11	30.00	117.02	1,758.03	-116.26	228.00	0.59	3.00	3.00	0.00
Start 6206.00 hold at 1803.11 MD									
1,900.00	30.00	117.02	1,841.93	-138.27	271.16	0.70	0.00	0.00	0.00
2,000.00	30.00	117.02	1,928.53	-160.99	315.71	0.81	0.00	0.00	0.00
2,100.00	30.00	117.02	2,015.13	-183.70	360.26	0.92	0.00	0.00	0.00
2,200.00	30.00	117.02	2,101.73	-206.42	404.80	1.04	0.00	0.00	0.00
2,300.00	30.00	117.02	2,188.33	-229.13	449.35	1.15	0.00	0.00	0.00
2,400.00	30.00	117.02	2,274.93	-251.85	493.90	1.27	0.00	0.00	0.00
2,500.00	30.00	117.02	2,361.53	-274.57	538.45	1.38	0.00	0.00	0.00
2,600.00	30.00	117.02	2,448.13	-297.28	583.00	1.50	0.00	0.00	0.00
2,700.00	30.00	117.02	2,534.73	-320.00	627.54	1.61	0.00	0.00	0.00
2,800.00	30.00	117.02	2,621.33	-342.71	672.09	1.72	0.00	0.00	0.00
2,900.00	30.00	117.02	2,707.93	-365.43	716.64	1.84	0.00	0.00	0.00
3,000.00	30.00	117.02	2,794.53	-388.14	761.19	1.95	0.00	0.00	0.00
3,100.00	30.00	117.02	2,881.12	-410.86	805.73	2.07	0.00	0.00	0.00
3,200.00	30.00	117.02	2,967.72	-433.58	850.28	2.18	0.00	0.00	0.00
3,300.00	30.00	117.02	3,054.32	-456.29	894.83	2.30	0.00	0.00	0.00
3,400.00	30.00	117.02	3,140.92	-479.01	939.38	2.41	0.00	0.00	0.00
3,500.00	30.00	117.02	3,227.52	-501.72	983.93	2.52	0.00	0.00	0.00
3,600.00	30.00	117.02	3,314.12	-524.44	1,028.47	2.64	0.00	0.00	0.00
3,700.00	30.00	117.02	3,400.72	-547.16	1,073.02	2.75	0.00	0.00	0.00
3,800.00	30.00	117.02	3,487.32	-569.87	1,117.57	2.87	0.00	0.00	0.00
3,900.00	30.00	117.02	3,573.92	-592.59	1,162.12	2.98	0.00	0.00	0.00
4,000.00	30.00	117.02	3,660.52	-615.30	1,206.67	3.10	0.00	0.00	0.00
4,100.00	30.00	117.02	3,747.12	-638.02	1,251.21	3.21	0.00	0.00	0.00
4,200.00	30.00	117.02	3,833.72	-660.74	1,295.76	3.33	0.00	0.00	0.00
4,300.00	30.00	117.02	3,920.32	-683.45	1,340.31	3.44	0.00	0.00	0.00
4,400.00	30.00	117.02	4,006.92	-706.17	1,384.86	3.55	0.00	0.00	0.00
4,500.00	30.00	117.02	4,093.52	-728.88	1,429.41	3.67	0.00	0.00	0.00
4,600.00	30.00	117.02	4,180.12	-751.60	1,473.95	3.78	0.00	0.00	0.00
4,700.00	30.00	117.02	4,266.72	-774.31	1,518.50	3.90	0.00	0.00	0.00
4,800.00	30.00	117.02	4,353.32	-797.03	1,563.05	4.01	0.00	0.00	0.00
4,900.00	30.00	117.02	4,439.92	-819.75	1,607.60	4.13	0.00	0.00	0.00
5,000.00	30.00	117.02	4,526.52	-842.46	1,652.15	4.24	0.00	0.00	0.00
5,100.00	30.00	117.02	4,613.11	-865.18	1,696.69	4.35	0.00	0.00	0.00
5,200.00	30.00	117.02	4,699.71	-887.89	1,741.24	4.47	0.00	0.00	0.00
5,300.00	30.00	117.02	4,786.31	-910.61	1,785.79	4.58	0.00	0.00	0.00
5,400.00	30.00	117.02	4,872.91	-933.33	1,830.34	4.70	0.00	0.00	0.00
5,500.00	30.00	117.02	4,959.51	-956.04	1,874.89	4.81	0.00	0.00	0.00
5,600.00	30.00	117.02	5,046.11	-978.76	1,919.43	4.93	0.00	0.00	0.00
5,700.00	30.00	117.02	5,132.71	-1,001.47	1,963.98	5.04	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well GUS LD 15-032HC
Company:	GREAT WESTERN OPERATING COMPANY	TVD Reference:	KB 20' @ 5144.00usft
Project:	ADAMS COUNTY	MD Reference:	KB 20' @ 5144.00usft
Site:	SEC 21-T1S-R67W	North Reference:	True
Well:	GUS LD 15-032HC	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
5,800.00	30.00	117.02	5,219.31	-1,024.19	2,008.53	5.15	0.00	0.00	0.00
5,900.00	30.00	117.02	5,305.91	-1,046.91	2,053.08	5.27	0.00	0.00	0.00
6,000.00	30.00	117.02	5,392.51	-1,069.62	2,097.63	5.38	0.00	0.00	0.00
6,100.00	30.00	117.02	5,479.11	-1,092.34	2,142.17	5.50	0.00	0.00	0.00
6,200.00	30.00	117.02	5,565.71	-1,115.05	2,186.72	5.61	0.00	0.00	0.00
6,300.00	30.00	117.02	5,652.31	-1,137.77	2,231.27	5.73	0.00	0.00	0.00
6,400.00	30.00	117.02	5,738.91	-1,160.48	2,275.82	5.84	0.00	0.00	0.00
6,500.00	30.00	117.02	5,825.51	-1,183.20	2,320.36	5.95	0.00	0.00	0.00
6,600.00	30.00	117.02	5,912.11	-1,205.92	2,364.91	6.07	0.00	0.00	0.00
6,700.00	30.00	117.02	5,998.71	-1,228.63	2,409.46	6.18	0.00	0.00	0.00
6,800.00	30.00	117.02	6,085.31	-1,251.35	2,454.01	6.30	0.00	0.00	0.00
6,900.00	30.00	117.02	6,171.91	-1,274.06	2,498.56	6.41	0.00	0.00	0.00
7,000.00	30.00	117.02	6,258.50	-1,296.78	2,543.10	6.53	0.00	0.00	0.00
7,100.00	30.00	117.02	6,345.10	-1,319.50	2,587.65	6.64	0.00	0.00	0.00
7,200.00	30.00	117.02	6,431.70	-1,342.21	2,632.20	6.75	0.00	0.00	0.00
7,300.00	30.00	117.02	6,518.30	-1,364.93	2,676.75	6.87	0.00	0.00	0.00
7,400.00	30.00	117.02	6,604.90	-1,387.64	2,721.30	6.98	0.00	0.00	0.00
7,500.00	30.00	117.02	6,691.50	-1,410.36	2,765.84	7.10	0.00	0.00	0.00
7,600.00	30.00	117.02	6,778.10	-1,433.08	2,810.39	7.21	0.00	0.00	0.00
7,700.00	30.00	117.02	6,864.70	-1,455.79	2,854.94	7.33	0.00	0.00	0.00
7,800.00	30.00	117.02	6,951.30	-1,478.51	2,899.49	7.44	0.00	0.00	0.00
7,900.00	30.00	117.02	7,037.90	-1,501.22	2,944.04	7.55	0.00	0.00	0.00
8,009.12	30.00	117.02	7,132.39	-1,526.01	2,992.64	7.68	0.00	0.00	0.00
Start DLS 8.00 TFO -113.83									
8,050.00	28.82	110.80	7,168.02	-1,534.16	3,010.97	8.79	8.00	-2.89	-15.20
8,100.00	27.80	102.64	7,212.05	-1,540.99	3,033.62	13.05	8.00	-2.05	-16.32
8,150.00	27.28	94.06	7,256.40	-1,544.36	3,056.43	20.46	8.00	-1.04	-17.17
8,200.00	27.30	85.33	7,300.86	-1,544.23	3,079.30	31.01	8.00	0.04	-17.46
8,250.00	27.85	76.76	7,345.20	-1,540.62	3,102.11	44.62	8.00	1.11	-17.13
8,300.00	28.91	68.64	7,389.20	-1,533.54	3,124.74	61.25	8.00	2.12	-16.24
8,350.00	30.42	61.15	7,432.66	-1,523.03	3,147.09	80.81	8.00	3.02	-14.98
8,400.00	32.32	54.38	7,475.37	-1,509.13	3,169.06	103.19	8.00	3.80	-13.54
8,450.00	34.54	48.34	7,517.10	-1,491.92	3,190.52	128.30	8.00	4.44	-12.08
8,500.00	37.03	42.98	7,557.67	-1,471.47	3,211.38	156.02	8.00	4.97	-10.72
8,550.00	39.73	38.23	7,596.87	-1,447.90	3,231.54	186.20	8.00	5.40	-9.51
8,600.00	42.60	34.00	7,634.51	-1,421.30	3,250.90	218.69	8.00	5.75	-8.46
8,650.00	45.62	30.21	7,670.42	-1,391.82	3,269.36	253.35	8.00	6.03	-7.56
8,700.00	48.74	26.81	7,704.40	-1,359.59	3,286.84	290.00	8.00	6.25	-6.81
8,750.00	51.96	23.72	7,736.30	-1,324.78	3,303.24	328.47	8.00	6.43	-6.18
8,800.00	55.25	20.89	7,765.97	-1,287.55	3,318.49	368.56	8.00	6.58	-5.65
8,850.00	58.60	18.29	7,793.26	-1,248.08	3,332.52	410.08	8.00	6.70	-5.22
8,900.00	62.00	15.86	7,818.03	-1,206.57	3,345.26	452.83	8.00	6.80	-4.85
8,950.00	65.44	13.58	7,840.16	-1,163.21	3,356.63	496.59	8.00	6.88	-4.55
9,000.00	68.91	11.43	7,859.55	-1,118.23	3,366.60	541.17	8.00	6.94	-4.31
9,050.00	72.41	9.37	7,876.11	-1,071.83	3,375.11	586.34	8.00	7.00	-4.11
9,100.00	75.93	7.40	7,889.74	-1,024.25	3,382.11	631.87	8.00	7.04	-3.95
9,150.00	79.47	5.48	7,900.40	-975.72	3,387.58	677.56	8.00	7.07	-3.83
9,200.00	83.01	3.60	7,908.01	-926.47	3,391.49	723.16	8.00	7.09	-3.75
9,250.00	86.56	1.76	7,912.55	-876.74	3,393.82	768.48	8.00	7.11	-3.69
9,298.29	90.00	359.99	7,914.00	-828.48	3,394.56	811.75	8.00	7.11	-3.66
Start 7344.83 hold at 9298.29 MD									
9,300.00	90.00	359.99	7,914.00	-826.77	3,394.56	813.27	0.00	0.00	0.00
9,400.00	90.00	359.99	7,914.00	-726.77	3,394.54	902.24	0.00	0.00	0.00
9,500.00	90.00	359.99	7,914.00	-626.77	3,394.52	991.22	0.00	0.00	0.00

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well GUS LD 15-032HC
Company:	GREAT WESTERN OPERATING COMPANY	TVD Reference:	KB 20' @ 5144.00usft
Project:	ADAMS COUNTY	MD Reference:	KB 20' @ 5144.00usft
Site:	SEC 21-T1S-R67W	North Reference:	True
Well:	GUS LD 15-032HC	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
9,600.00	90.00	359.99	7,914.00	-526.77	3,394.50	1,080.19	0.00	0.00	0.00	
9,700.00	90.00	359.99	7,914.00	-426.77	3,394.49	1,169.17	0.00	0.00	0.00	
9,800.00	90.00	359.99	7,914.00	-326.77	3,394.47	1,258.14	0.00	0.00	0.00	
9,900.00	90.00	359.99	7,914.00	-226.77	3,394.45	1,347.12	0.00	0.00	0.00	
10,000.00	90.00	359.99	7,914.00	-126.77	3,394.43	1,436.09	0.00	0.00	0.00	
10,100.00	90.00	359.99	7,914.00	-26.77	3,394.42	1,525.07	0.00	0.00	0.00	
10,200.00	90.00	359.99	7,914.00	73.23	3,394.40	1,614.04	0.00	0.00	0.00	
10,300.00	90.00	359.99	7,914.00	173.23	3,394.38	1,703.01	0.00	0.00	0.00	
10,400.00	90.00	359.99	7,914.00	273.23	3,394.36	1,791.99	0.00	0.00	0.00	
10,500.00	90.00	359.99	7,914.00	373.23	3,394.35	1,880.96	0.00	0.00	0.00	
10,600.00	90.00	359.99	7,914.00	473.23	3,394.33	1,969.94	0.00	0.00	0.00	
10,700.00	90.00	359.99	7,914.00	573.23	3,394.31	2,058.91	0.00	0.00	0.00	
10,800.00	90.00	359.99	7,914.00	673.23	3,394.29	2,147.89	0.00	0.00	0.00	
10,900.00	90.00	359.99	7,914.00	773.23	3,394.28	2,236.86	0.00	0.00	0.00	
11,000.00	90.00	359.99	7,914.00	873.23	3,394.26	2,325.83	0.00	0.00	0.00	
11,100.00	90.00	359.99	7,914.00	973.23	3,394.24	2,414.81	0.00	0.00	0.00	
11,200.00	90.00	359.99	7,914.00	1,073.23	3,394.22	2,503.78	0.00	0.00	0.00	
11,300.00	90.00	359.99	7,914.00	1,173.23	3,394.21	2,592.76	0.00	0.00	0.00	
11,400.00	90.00	359.99	7,914.00	1,273.23	3,394.19	2,681.73	0.00	0.00	0.00	
11,500.00	90.00	359.99	7,914.00	1,373.23	3,394.17	2,770.71	0.00	0.00	0.00	
11,600.00	90.00	359.99	7,914.00	1,473.23	3,394.15	2,859.68	0.00	0.00	0.00	
11,700.00	90.00	359.99	7,914.00	1,573.23	3,394.14	2,948.66	0.00	0.00	0.00	
11,800.00	90.00	359.99	7,914.00	1,673.23	3,394.12	3,037.63	0.00	0.00	0.00	
11,900.00	90.00	359.99	7,914.00	1,773.23	3,394.10	3,126.60	0.00	0.00	0.00	
12,000.00	90.00	359.99	7,914.00	1,873.23	3,394.08	3,215.58	0.00	0.00	0.00	
12,100.00	90.00	359.99	7,914.00	1,973.23	3,394.07	3,304.55	0.00	0.00	0.00	
12,200.00	90.00	359.99	7,914.00	2,073.23	3,394.05	3,393.53	0.00	0.00	0.00	
12,300.00	90.00	359.99	7,914.00	2,173.23	3,394.03	3,482.50	0.00	0.00	0.00	
12,400.00	90.00	359.99	7,914.00	2,273.23	3,394.01	3,571.48	0.00	0.00	0.00	
12,500.00	90.00	359.99	7,914.00	2,373.23	3,394.00	3,660.45	0.00	0.00	0.00	
12,600.00	90.00	359.99	7,914.00	2,473.23	3,393.98	3,749.42	0.00	0.00	0.00	
12,700.00	90.00	359.99	7,914.00	2,573.23	3,393.96	3,838.40	0.00	0.00	0.00	
12,800.00	90.00	359.99	7,914.00	2,673.23	3,393.94	3,927.37	0.00	0.00	0.00	
12,900.00	90.00	359.99	7,914.00	2,773.23	3,393.93	4,016.35	0.00	0.00	0.00	
13,000.00	90.00	359.99	7,914.00	2,873.23	3,393.91	4,105.32	0.00	0.00	0.00	
13,100.00	90.00	359.99	7,914.00	2,973.23	3,393.89	4,194.30	0.00	0.00	0.00	
13,200.00	90.00	359.99	7,914.00	3,073.23	3,393.87	4,283.27	0.00	0.00	0.00	
13,300.00	90.00	359.99	7,914.00	3,173.23	3,393.86	4,372.25	0.00	0.00	0.00	
13,400.00	90.00	359.99	7,914.00	3,273.23	3,393.84	4,461.22	0.00	0.00	0.00	
13,500.00	90.00	359.99	7,914.00	3,373.23	3,393.82	4,550.19	0.00	0.00	0.00	
13,600.00	90.00	359.99	7,914.00	3,473.23	3,393.80	4,639.17	0.00	0.00	0.00	
13,700.00	90.00	359.99	7,914.00	3,573.23	3,393.79	4,728.14	0.00	0.00	0.00	
13,800.00	90.00	359.99	7,914.00	3,673.23	3,393.77	4,817.12	0.00	0.00	0.00	
13,900.00	90.00	359.99	7,914.00	3,773.23	3,393.75	4,906.09	0.00	0.00	0.00	
14,000.00	90.00	359.99	7,914.00	3,873.23	3,393.73	4,995.07	0.00	0.00	0.00	
14,100.00	90.00	359.99	7,914.00	3,973.23	3,393.72	5,084.04	0.00	0.00	0.00	
14,200.00	90.00	359.99	7,914.00	4,073.23	3,393.70	5,173.01	0.00	0.00	0.00	
14,300.00	90.00	359.99	7,914.00	4,173.23	3,393.68	5,261.99	0.00	0.00	0.00	
14,400.00	90.00	359.99	7,914.00	4,273.23	3,393.66	5,350.96	0.00	0.00	0.00	
14,500.00	90.00	359.99	7,914.00	4,373.23	3,393.65	5,439.94	0.00	0.00	0.00	
14,600.00	90.00	359.99	7,914.00	4,473.23	3,393.63	5,528.91	0.00	0.00	0.00	
14,700.00	90.00	359.99	7,914.00	4,573.23	3,393.61	5,617.89	0.00	0.00	0.00	
14,800.00	90.00	359.99	7,914.00	4,673.23	3,393.59	5,706.86	0.00	0.00	0.00	
14,900.00	90.00	359.99	7,914.00	4,773.23	3,393.58	5,795.84	0.00	0.00	0.00	

Planning Report

Database:	EDM 5000.16 Single User Db	Local Co-ordinate Reference:	Well GUS LD 15-032HC
Company:	GREAT WESTERN OPERATING COMPANY	TVD Reference:	KB 20' @ 5144.00usft
Project:	ADAMS COUNTY	MD Reference:	KB 20' @ 5144.00usft
Site:	SEC 21-T1S-R67W	North Reference:	True
Well:	GUS LD 15-032HC	Survey Calculation Method:	Minimum Curvature
Wellbore:	OWB		
Design:	PROPOSAL 1		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
15,000.00	90.00	359.99	7,914.00	4,873.23	3,393.56	5,884.81	0.00	0.00	0.00	
15,100.00	90.00	359.99	7,914.00	4,973.23	3,393.54	5,973.78	0.00	0.00	0.00	
15,200.00	90.00	359.99	7,914.00	5,073.23	3,393.52	6,062.76	0.00	0.00	0.00	
15,300.00	90.00	359.99	7,914.00	5,173.23	3,393.51	6,151.73	0.00	0.00	0.00	
15,400.00	90.00	359.99	7,914.00	5,273.23	3,393.49	6,240.71	0.00	0.00	0.00	
15,500.00	90.00	359.99	7,914.00	5,373.23	3,393.47	6,329.68	0.00	0.00	0.00	
15,600.00	90.00	359.99	7,914.00	5,473.23	3,393.45	6,418.66	0.00	0.00	0.00	
15,700.00	90.00	359.99	7,914.00	5,573.23	3,393.44	6,507.63	0.00	0.00	0.00	
15,800.00	90.00	359.99	7,914.00	5,673.23	3,393.42	6,596.60	0.00	0.00	0.00	
15,900.00	90.00	359.99	7,914.00	5,773.23	3,393.40	6,685.58	0.00	0.00	0.00	
16,000.00	90.00	359.99	7,914.00	5,873.23	3,393.38	6,774.55	0.00	0.00	0.00	
16,100.00	90.00	359.99	7,914.00	5,973.23	3,393.37	6,863.53	0.00	0.00	0.00	
16,200.00	90.00	359.99	7,914.00	6,073.23	3,393.35	6,952.50	0.00	0.00	0.00	
16,300.00	90.00	359.99	7,914.00	6,173.23	3,393.33	7,041.48	0.00	0.00	0.00	
16,400.00	90.00	359.99	7,914.00	6,273.23	3,393.32	7,130.45	0.00	0.00	0.00	
16,500.00	90.00	359.99	7,914.00	6,373.23	3,393.30	7,219.43	0.00	0.00	0.00	
16,600.00	90.00	359.99	7,914.00	6,473.23	3,393.28	7,308.40	0.00	0.00	0.00	
16,643.12	90.00	359.99	7,914.00	6,516.35	3,393.27	7,346.77	0.00	0.00	0.00	
Start DLS 2.00 TFO -90.00										
16,651.37	90.00	359.83	7,914.00	6,524.59	3,393.26	7,354.10	2.00	0.00	-2.00	
Start 91.93 hold at 16651.37 MD										
16,700.00	90.00	359.83	7,914.00	6,573.23	3,393.11	7,397.30	0.00	0.00	0.00	
16,743.30	90.00	359.83	7,914.00	6,616.52	3,392.98	7,435.77	0.00	0.00	0.00	
TD at 16743.30										

Design Targets										
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude Longitude		
GUS 15-032HC-PBHL - plan hits target center - Point	0.00	0.00	7,914.00	6,616.52	3,392.98	1,232,924.73	3,175,493.67	39.971061°N 104.873841°W		
GUS 15-032HC-LP - plan hits target center - Point	0.00	0.00	7,914.00	-828.48	3,394.56	1,225,479.92	3,175,546.80	39.950623°N 104.873839°W		
GUS 15-032HC-BTM PE - plan hits target center - Point	0.00	0.00	7,914.00	6,516.35	3,393.27	1,232,824.56	3,175,494.66	39.970786°N 104.873840°W		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
803.00	803.00	0.00	0.00	Start Build 3.00	
1,803.11	1,758.03	-116.26	228.00	Start 6206.00 hold at 1803.11 MD	
8,009.12	7,132.39	-1,526.01	2,992.64	Start DLS 8.00 TFO -113.83	
9,298.29	7,914.00	-828.48	3,394.56	Start 7344.83 hold at 9298.29 MD	
16,643.12	7,914.00	6,516.35	3,393.27	Start DLS 2.00 TFO -90.00	
16,651.37	7,914.00	6,524.59	3,393.26	Start 91.93 hold at 16651.37 MD	
16,743.30	7,914.00	6,616.52	3,392.98	TD at 16743.30	