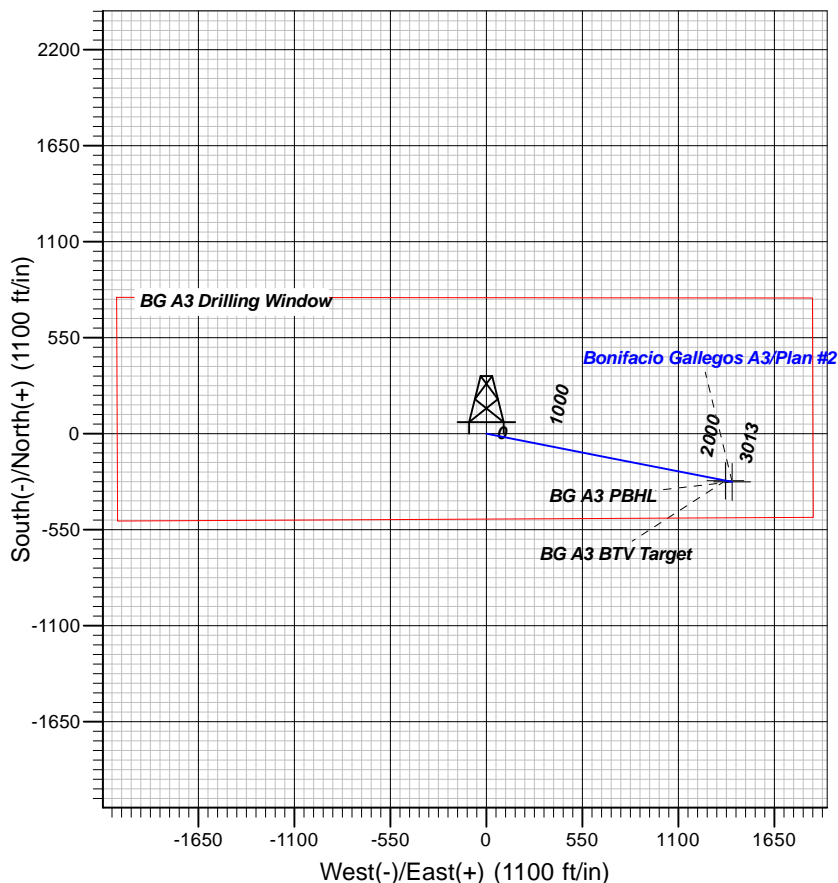
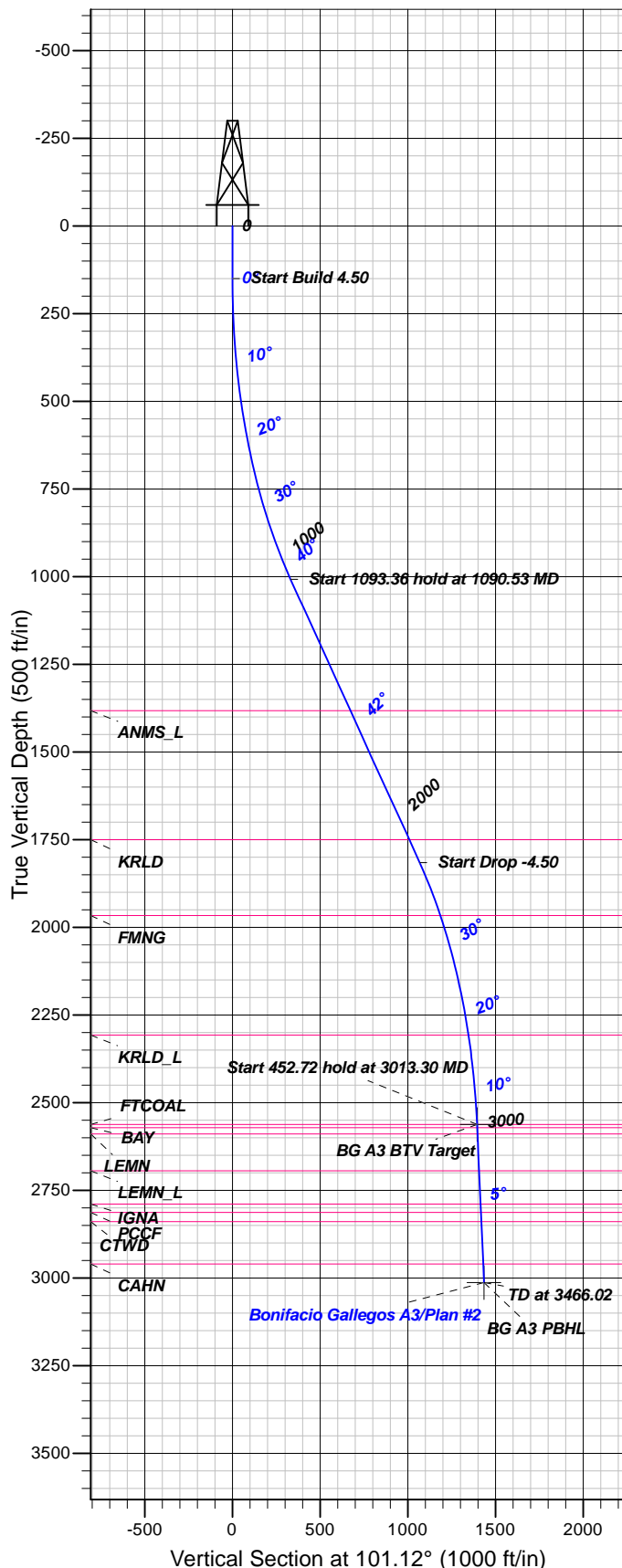


Well Details: Bonifacio Gallegos A3

GL 6634' & RKB 13' @ 6647.00ft
+N/-S 0.00 +E/-W 0.00 Northing 1175837.27 Easting 2362701.92 Latitude 37.1290922 Longitude -107.6861408 Slot

T M Azimuths to True North
Magnetic North: 9.55°
Magnetic Field
Strength: 50490.6snT
Dip Angle: 63.73°
Date: 2/24/2015
Model: BGGM2014



FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1382.00	1597.33	ANMS_L
1750.00	2095.06	KRLD
1966.00	2374.90	FMNG
2307.00	2753.21	KRLD_L
2562.00	3013.30	FTCOAL
2571.00	3022.34	BAY
2589.00	3040.40	LEMN
2694.00	3145.81	LEMN_L
2789.00	3241.17	IGNA
2813.00	3265.26	PCCF
2839.00	3291.36	CTWD
2960.00	3412.82	CAHN

Plan: Plan #2

15:58, February 26 2015
Created By: Janie Collins

PROJECT DETAILS: La Plata County, CO NAD83

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: Colorado Southern Zone

System Datum: Mean Sea Level

CASING DETAILS

No casing data is available

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	150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	
3	1090.53	42.32	101.12	1007.29	-63.99	325.64	4.50	101.12	331.87	
4	2183.89	42.32	101.12	1815.68	-205.93	1048.01	0.00	0.001068.05		
5	3013.30	5.00	101.12	2562.00	-268.98	1368.89	4.50	180.001395.07		BG A3 BTV Target
6	3466.02	5.00	101.12	3013.00	-276.59	1407.61	0.00	0.001434.52		BG A3 PBHL

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
BG A3 BTV Target	2562.00	-268.98	1368.89	1175536.33	2364064.14	37.1283533	-107.6814455	Point
- plan hits target center								
BG A3 PBHL	3013.00	-276.59	1407.61	1175527.82	2364102.67	37.1283324	-107.6813127	Point
- plan hits target center								



B.P.

**La Plata County, CO NAD83
SEC 2-T33N-R8W
Bonifacio Gallegos A3**

OH

Plan: Plan #2

Standard Planning Report

26 February, 2015





Database:	Grand Junction District	Local Co-ordinate Reference:	Well Bonifacio Gallegos A3
Company:	B.P.	TVD Reference:	GL 6634' & RKB 13' @ 6647.00ft
Project:	La Plata County, CO NAD83	MD Reference:	GL 6634' & RKB 13' @ 6647.00ft
Site:	SEC 2-T33N-R8W	North Reference:	True
Well:	Bonifacio Gallegos A3	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Project	La Plata County, CO NAD83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Southern Zone		

Site	SEC 2-T33N-R8W			
Site Position:		Northing:	1,175,837.31 usft	Latitude: 37.1290922
From:	Lat/Long	Easting:	2,362,701.92 usft	Longitude: -107.6861408
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence: -1.34 °

Well	Bonifacio Gallegos A3			
Well Position	+N/-S	-0.04 ft	Northing:	1,175,837.27 usft
	+E/-W	0.00 ft	Easting:	2,362,701.92 usft
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft
			Ground Level:	6,634.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2014	2/24/2015	9.55	63.73	50,491

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	101.12

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	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	
150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,090.53	42.32	101.12	1,007.29	-63.99	325.64	4.50	4.50	0.00	101.12	
2,183.89	42.32	101.12	1,815.68	-205.93	1,048.01	0.00	0.00	0.00	0.00	
3,013.30	5.00	101.12	2,562.00	-268.98	1,368.89	4.50	-4.50	0.00	180.00	BG A3 BTV Target
3,466.02	5.00	101.12	3,013.00	-276.59	1,407.61	0.00	0.00	0.00	0.00	BG A3 PBHL



Database:	Grand Junction District	Local Co-ordinate Reference:	Well Bonifacio Gallegos A3
Company:	B.P.	TVD Reference:	GL 6634' & RKB 13' @ 6647.00ft
Project:	La Plata County, CO NAD83	MD Reference:	GL 6634' & RKB 13' @ 6647.00ft
Site:	SEC 2-T33N-R8W	North Reference:	True
Well:	Bonifacio Gallegos A3	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	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
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
150.00	0.00	0.00	150.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	2.25	101.12	199.99	-0.19	0.96	0.98	4.50	4.50	0.00
300.00	6.75	101.12	299.65	-1.70	8.66	8.83	4.50	4.50	0.00
400.00	11.25	101.12	398.40	-4.72	24.01	24.46	4.50	4.50	0.00
500.00	15.75	101.12	495.61	-9.22	46.91	47.80	4.50	4.50	0.00
600.00	20.25	101.12	590.69	-15.17	77.22	78.70	4.50	4.50	0.00
700.00	24.75	101.12	683.05	-22.55	114.76	116.96	4.50	4.50	0.00
800.00	29.25	101.12	772.13	-31.30	159.30	162.34	4.50	4.50	0.00
900.00	33.75	101.12	857.37	-41.37	210.55	214.58	4.50	4.50	0.00
1,000.00	38.25	101.12	938.25	-52.70	268.21	273.34	4.50	4.50	0.00
1,090.53	42.32	101.12	1,007.29	-63.99	325.64	331.87	4.50	4.50	0.00
1,100.00	42.32	101.12	1,014.30	-65.22	331.90	338.25	0.00	0.00	0.00
1,200.00	42.32	101.12	1,088.24	-78.20	397.97	405.58	0.00	0.00	0.00
1,300.00	42.32	101.12	1,162.17	-91.18	464.04	472.91	0.00	0.00	0.00
1,400.00	42.32	101.12	1,236.11	-104.16	530.10	540.24	0.00	0.00	0.00
1,500.00	42.32	101.12	1,310.04	-117.14	596.17	607.57	0.00	0.00	0.00
1,597.33	42.32	101.12	1,382.00	-129.78	660.47	673.10	0.00	0.00	0.00
ANMS_L									
1,600.00	42.32	101.12	1,383.98	-130.13	662.24	674.90	0.00	0.00	0.00
1,700.00	42.32	101.12	1,457.91	-143.11	728.31	742.24	0.00	0.00	0.00
1,800.00	42.32	101.12	1,531.85	-156.09	794.38	809.57	0.00	0.00	0.00
1,900.00	42.32	101.12	1,605.78	-169.07	860.45	876.90	0.00	0.00	0.00
2,000.00	42.32	101.12	1,679.72	-182.06	926.51	944.23	0.00	0.00	0.00
2,095.06	42.32	101.12	1,750.00	-194.40	989.32	1,008.24	0.00	0.00	0.00
KRLD									
2,100.00	42.32	101.12	1,753.65	-195.04	992.58	1,011.56	0.00	0.00	0.00
2,183.89	42.32	101.12	1,815.68	-205.93	1,048.01	1,068.05	0.00	0.00	0.00
2,200.00	41.60	101.12	1,827.66	-208.00	1,058.58	1,078.82	4.50	-4.50	0.00
2,300.00	37.10	101.12	1,904.97	-220.23	1,120.77	1,142.21	4.50	-4.50	0.00
2,374.90	33.73	101.12	1,966.00	-228.59	1,163.36	1,185.60	4.50	-4.50	0.00
FMNG									
2,400.00	32.60	101.12	1,987.01	-231.24	1,176.83	1,199.33	4.50	-4.50	0.00
2,500.00	28.10	101.12	2,073.29	-240.98	1,226.39	1,249.85	4.50	-4.50	0.00
2,600.00	23.60	101.12	2,163.26	-249.38	1,269.16	1,293.43	4.50	-4.50	0.00
2,700.00	19.10	101.12	2,256.37	-256.40	1,304.88	1,329.83	4.50	-4.50	0.00
2,753.21	16.70	101.12	2,307.00	-259.55	1,320.92	1,346.18	4.50	-4.50	0.00
KRLD_L									
2,800.00	14.60	101.12	2,352.06	-261.99	1,333.31	1,358.81	4.50	-4.50	0.00
2,900.00	10.10	101.12	2,449.72	-266.11	1,354.29	1,380.19	4.50	-4.50	0.00
3,000.00	5.60	101.12	2,548.76	-268.74	1,367.68	1,393.84	4.50	-4.50	0.00
3,013.30	5.00	101.12	2,562.00	-268.98	1,368.89	1,395.07	4.50	-4.50	0.00
FTCOAL - BG A3 BTV Target									
3,022.34	5.00	101.12	2,571.00	-269.13	1,369.66	1,395.85	0.00	0.00	0.00
BAY									
3,040.40	5.00	101.12	2,589.00	-269.44	1,371.21	1,397.43	0.00	0.00	0.00
LEMN									
3,100.00	5.00	101.12	2,648.37	-270.44	1,376.30	1,402.62	0.00	0.00	0.00
3,145.81	5.00	101.12	2,694.00	-271.21	1,380.22	1,406.61	0.00	0.00	0.00
LEMN_L									
3,200.00	5.00	101.12	2,747.99	-272.12	1,384.86	1,411.34	0.00	0.00	0.00
3,241.17	5.00	101.12	2,789.00	-272.81	1,388.38	1,414.93	0.00	0.00	0.00



Database:	Grand Junction District	Local Co-ordinate Reference:	Well Bonifacio Gallegos A3
Company:	B.P.	TVD Reference:	GL 6634' & RKB 13' @ 6647.00ft
Project:	La Plata County, CO NAD83	MD Reference:	GL 6634' & RKB 13' @ 6647.00ft
Site:	SEC 2-T33N-R8W	North Reference:	True
Well:	Bonifacio Gallegos A3	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	Plan #2		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
IGNA										
3,265.26	5.00	101.12	2,813.00	-273.21	1,390.44	1,417.03	0.00	0.00	0.00	
PCCF										
3,291.36	5.00	101.12	2,839.00	-273.65	1,392.67	1,419.30	0.00	0.00	0.00	
CTWD										
3,300.00	5.00	101.12	2,847.61	-273.80	1,393.41	1,420.05	0.00	0.00	0.00	
3,400.00	5.00	101.12	2,947.23	-275.48	1,401.96	1,428.77	0.00	0.00	0.00	
3,412.82	5.00	101.12	2,960.00	-275.69	1,403.06	1,429.89	0.00	0.00	0.00	
CAHN										
3,466.02	5.00	101.12	3,013.00	-276.59	1,407.61	1,434.52	0.00	0.00	0.00	
BG A3 PBHL										

Design Targets										
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
BG A3 BTV Target - plan hits target center - Point	0.00	0.00	2,562.00	-268.98	1,368.89	1,175,536.33	2,364,064.14	37.1283533	-107.6814456	
BG A3 PBHL - plan hits target center - Point	0.00	0.00	3,013.00	-276.59	1,407.61	1,175,527.82	2,364,102.67	37.1283324	-107.6813128	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,597.33	1,382.00	ANMS_L		0.00		
2,095.06	1,750.00	KRLD		0.00		
2,374.90	1,966.00	FMNG		0.00		
2,753.21	2,307.00	KRLD_L		0.00		
3,013.30	2,562.00	FTCOAL		0.00		
3,022.34	2,571.00	BAY		0.00		
3,040.40	2,589.00	LEMN		0.00		
3,145.81	2,694.00	LEMN_L		0.00		
3,241.17	2,789.00	IGNA		0.00		
3,265.26	2,813.00	PCCF		0.00		
3,291.36	2,839.00	CTWD		0.00		
3,412.82	2,960.00	CAHN		0.00		