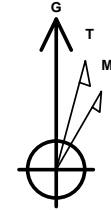




Company: B.P.  
Project: Archuleta County, CO NAD83  
Site: Carmelita Gallegos A3  
Well: Carmelita Gallegos A3  
Wellbore: Lateral 2 (Lwr Lemon)  
Design: Plan #1

PROJECT DETAILS: Archuleta 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  
Local North: Grid



Azimuths to Grid North  
True North: 1.17°  
Magnetic North: 10.39°

Magnetic Field  
Strength: 50307.7snT  
Dip Angle: 63.64°  
Date: 10/17/2016  
Model: IGRF2015

WELL DETAILS: Carmelita Gallegos A3

GL 6143.85' & RKB 11' @ 6154.85ft (Aztec 507)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1131854.11	2441795.87	37.0130911	-107.4118164

Plan: Plan #1 (Carmelita Gallegos A3/Lateral 2 (Lwr Lemon))

Created By: Janie Collins Date: 17:08, October 26 2016

DESIGN TARGET DETAILS

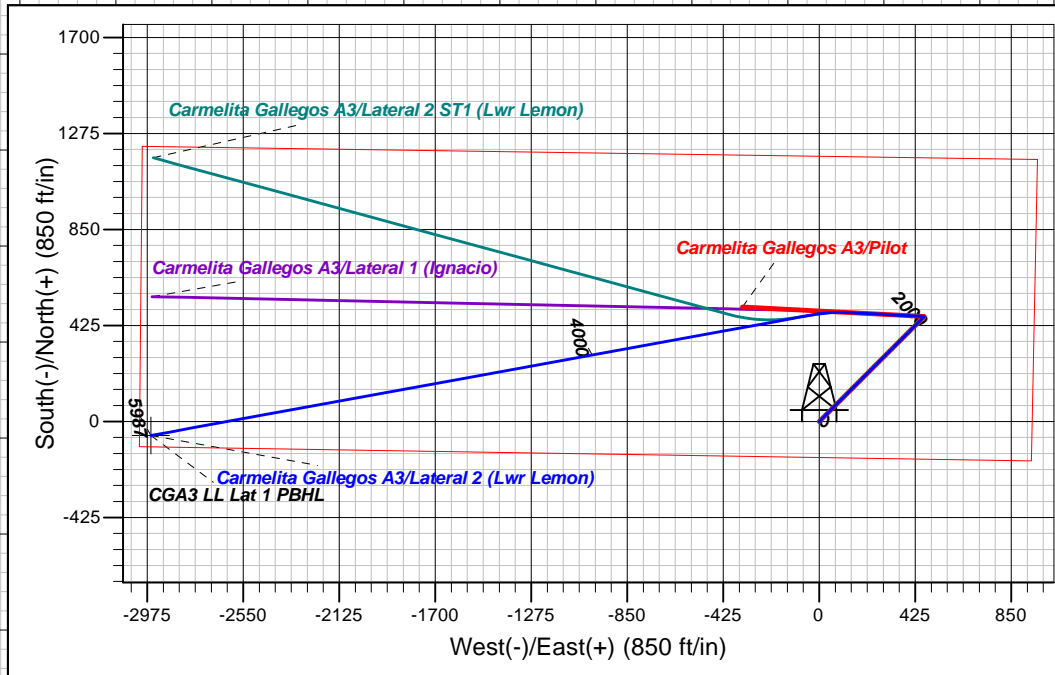
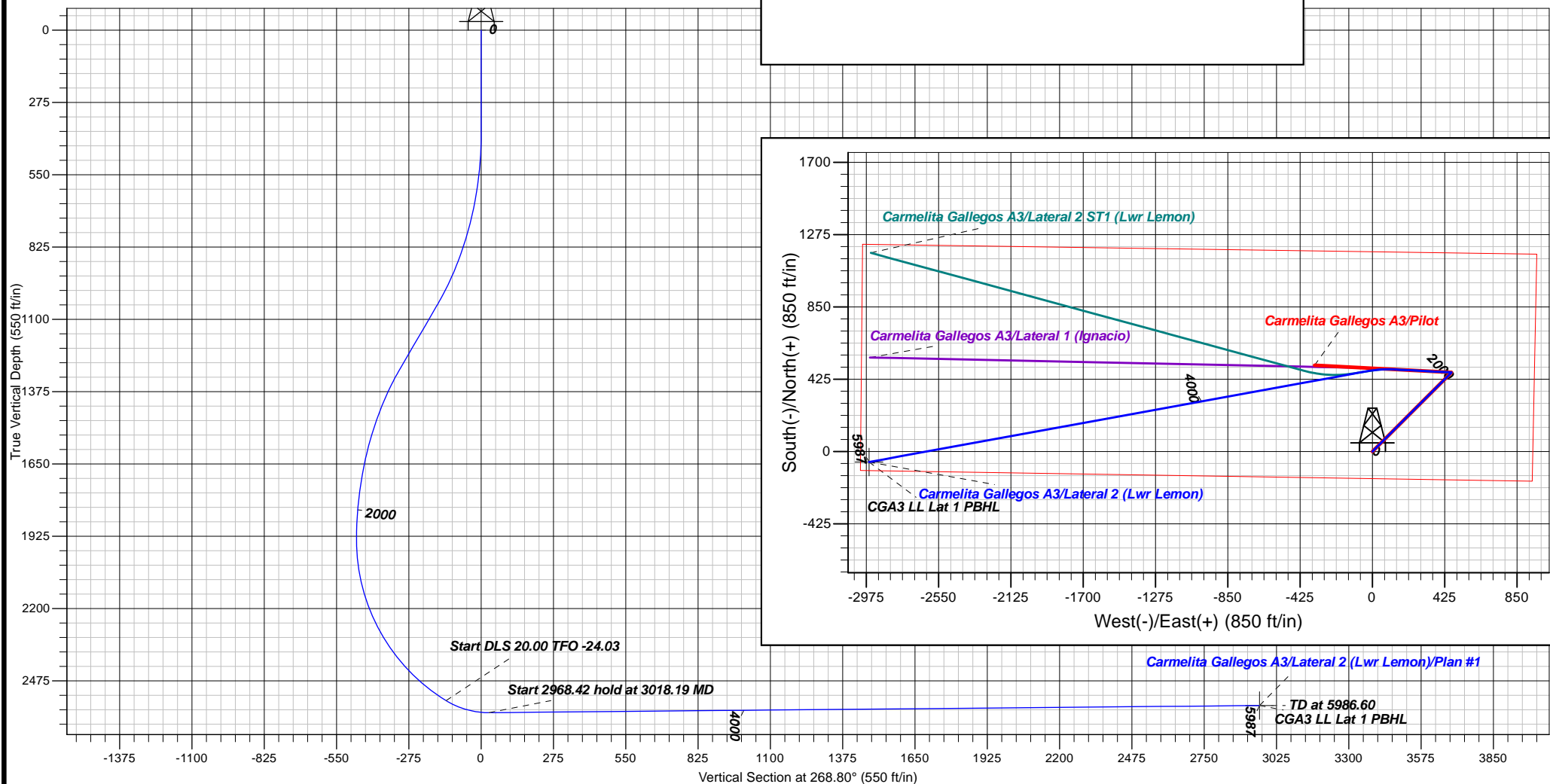
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
CGA3 LL Lat 1 PBHL	2569.00	-61.85	-2959.34	1131792.26	2438836.54	37.0127545	-107.4219447

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
2845.83	58.45	272.99	2550.30	482.62	123.87	0.00	0.00	-133.92	
3018.19	90.52	259.67	2596.00	470.63	-39.19	20.00	-24.03	29.35	
5986.60	90.52	259.67	2569.00	-61.85	-2959.34	0.00	0.00	2959.98	CGA3 LL Lat 1 PBHL

FORMATION TOP DETAILS

No formation data is available



Carmelita Gallegos A3/Lateral 2 (Lwr Lemon)/Plan #1

TD at 5986.60  
CGA3 LL Lat 1 PBHL



**B.P.**

**Archuleta County, CO NAD83**

**Carmelita Gallegos A3**

**Carmelita Gallegos A3**

**Lateral 2 (Lwr Lemon)**

**Plan: Plan #1**

## **Standard Planning Report**

**26 October, 2016**





<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well Carmelita Gallegos A3
<b>Company:</b>	B.P.	<b>TVD Reference:</b>	GL 6143.85' & RKB 11' @ 6154.85ft (Aztec 507)
<b>Project:</b>	Archuleta County, CO NAD83	<b>MD Reference:</b>	GL 6143.85' & RKB 11' @ 6154.85ft (Aztec 507)
<b>Site:</b>	Carmelita Gallegos A3	<b>North Reference:</b>	Grid
<b>Well:</b>	Carmelita Gallegos A3	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Lateral 2 (Lwr Lemon)		
<b>Design:</b>	Plan #1		

<b>Project</b>	Archuleta County, CO NAD83		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Southern Zone		

Site		Carmelita Gallegos A3			
Site Position:		Northing:	1,131,854.11 usft	Latitude:	37.0130910
From:	Map	Easting:	2,441,795.87 usft	Longitude:	-107.4118165
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence:	-1.17 °

Well	Carmelita Gallegos A3					
Well Position	+N/-S	0.00 ft	Northing:	1,131,854.11 usft	Latitude:	37.0130910
	+E/-W	0.00 ft	Easting:	2,441,795.87 usft	Longitude:	-107.4118165
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level:	6,143.85 ft

<b>Wellbore</b>	Lateral 2 (Lwr Lemon)				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2015	10/17/2016	9.21	63.64	50,308

<b>Design</b>	Plan #1				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN		<b>Tie On Depth:</b>	2,845.83
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.00	0.00	0.00	268.80	

<b>Plan Sections</b>										
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
2,845.83	58.45	272.99	2,550.30	482.62	123.87	0.00	0.00	0.00	0.00	
3,018.19	90.52	259.67	2,596.00	470.63	-39.19	20.00	18.61	-7.73	-24.03	
5,986.60	90.52	259.67	2,569.00	-61.85	-2,959.34	0.00	0.00	0.00	0.00	CGA3 LL Lat 1 PBHL



<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well Carmelita Gallegos A3
<b>Company:</b>	B.P.	<b>TVD Reference:</b>	GL 6143.85' & RKB 11' @ 6154.85ft (Aztec 507)
<b>Project:</b>	Archuleta County, CO NAD83	<b>MD Reference:</b>	GL 6143.85' & RKB 11' @ 6154.85ft (Aztec 507)
<b>Site:</b>	Carmelita Gallegos A3	<b>North Reference:</b>	Grid
<b>Well:</b>	Carmelita Gallegos A3	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Lateral 2 (Lwr Lemon)		
<b>Design:</b>	Plan #1		

## 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)
2,845.83	58.45	272.99	2,550.30	482.62	123.87	-133.92	0.00	0.00	0.00
2,900.01	68.43	268.27	2,574.51	483.06	75.49	-85.57	20.00	18.42	-8.71
3,000.01	87.11	260.93	2,595.63	473.69	-21.28	11.38	20.00	18.68	-7.34
3,018.19	90.52	259.67	2,596.00	470.63	-39.19	29.35	20.01	18.76	-6.95
3,100.01	90.52	259.67	2,595.26	455.95	-119.68	110.13	0.00	0.00	0.00
3,200.01	90.52	259.67	2,594.35	438.01	-218.06	208.86	0.00	0.00	0.00
3,300.01	90.52	259.67	2,593.44	420.07	-316.43	307.58	0.00	0.00	0.00
3,400.01	90.52	259.67	2,592.53	402.13	-414.81	406.31	0.00	0.00	0.00
3,500.01	90.52	259.67	2,591.62	384.20	-513.18	505.04	0.00	0.00	0.00
3,600.01	90.52	259.67	2,590.71	366.26	-611.55	603.77	0.00	0.00	0.00
3,700.01	90.52	259.67	2,589.80	348.32	-709.93	702.49	0.00	0.00	0.00
3,800.01	90.52	259.67	2,588.89	330.38	-808.30	801.22	0.00	0.00	0.00
3,900.01	90.52	259.67	2,587.98	312.44	-906.68	899.95	0.00	0.00	0.00
4,000.01	90.52	259.67	2,587.07	294.51	-1,005.05	998.68	0.00	0.00	0.00
4,100.01	90.52	259.67	2,586.16	276.57	-1,103.42	1,097.40	0.00	0.00	0.00
4,200.01	90.52	259.67	2,585.25	258.63	-1,201.80	1,196.13	0.00	0.00	0.00
4,300.01	90.52	259.67	2,584.34	240.69	-1,300.17	1,294.86	0.00	0.00	0.00
4,400.01	90.52	259.67	2,583.43	222.75	-1,398.55	1,393.59	0.00	0.00	0.00
4,500.01	90.52	259.67	2,582.52	204.82	-1,496.92	1,492.31	0.00	0.00	0.00
4,600.01	90.52	259.67	2,581.61	186.88	-1,595.29	1,591.04	0.00	0.00	0.00
4,700.01	90.52	259.67	2,580.70	168.94	-1,693.67	1,689.77	0.00	0.00	0.00
4,800.01	90.52	259.67	2,579.79	151.00	-1,792.04	1,788.49	0.00	0.00	0.00
4,900.01	90.52	259.67	2,578.88	133.06	-1,890.41	1,887.22	0.00	0.00	0.00
5,000.01	90.52	259.67	2,577.98	115.13	-1,988.79	1,985.95	0.00	0.00	0.00
5,100.01	90.52	259.67	2,577.07	97.19	-2,087.16	2,084.68	0.00	0.00	0.00
5,200.01	90.52	259.67	2,576.16	79.25	-2,185.54	2,183.40	0.00	0.00	0.00
5,300.01	90.52	259.67	2,575.25	61.31	-2,283.91	2,282.13	0.00	0.00	0.00
5,400.01	90.52	259.67	2,574.34	43.37	-2,382.28	2,380.86	0.00	0.00	0.00
5,500.01	90.52	259.67	2,573.43	25.43	-2,480.66	2,479.59	0.00	0.00	0.00
5,600.01	90.52	259.67	2,572.52	7.50	-2,579.03	2,578.31	0.00	0.00	0.00
5,700.01	90.52	259.67	2,571.61	-10.44	-2,677.41	2,677.04	0.00	0.00	0.00
5,800.01	90.52	259.67	2,570.70	-28.38	-2,775.78	2,775.77	0.00	0.00	0.00
5,900.01	90.52	259.67	2,569.79	-46.32	-2,874.15	2,874.49	0.00	0.00	0.00
5,986.60	90.52	259.67	2,569.00	-61.85	-2,959.34	2,959.98	0.00	0.00	0.00
CGA3 LL Lat 1 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
CGA3 LL Lat 1 PBHL - plan hits target center - Point	0.00	0.00	2,569.00	-61.85	-2,959.34	1,131,792.26	2,438,836.54	37.0127544	-107.4219448