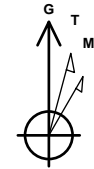




Company: B.P.  
Project: La Plata County, CO NAD83  
Site: Tiffany Pad 3  
Well: Tiffany 3-3  
Wellbore: Lateral 2 ST1  
Design: Plan #5

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  
Local North: Grid



Azimuths to Grid North  
True North: 1.23°  
Magnetic North: 10.40°

Magnetic Field  
Strength: 50124.8snT  
Dip Angle: 63.63°  
Date: 6/9/2017  
Model: HDGM

WELL DETAILS: Tiffany 3-3

GL 6717.01' & RKB 17' @ 6734.01usft (Aztec 777)  
+N/-S +E/-W Northing Easting Latitude Longitude  
0.00 0.00 1159206.37 2413080.52 37.0865378 -107.5121528

Plan: Plan #5 (Tiffany 3-3/Lateral 2 ST1)

Created By: Janie Collins Date: 14:54, August 09 2017

DESIGN TARGET DETAILS

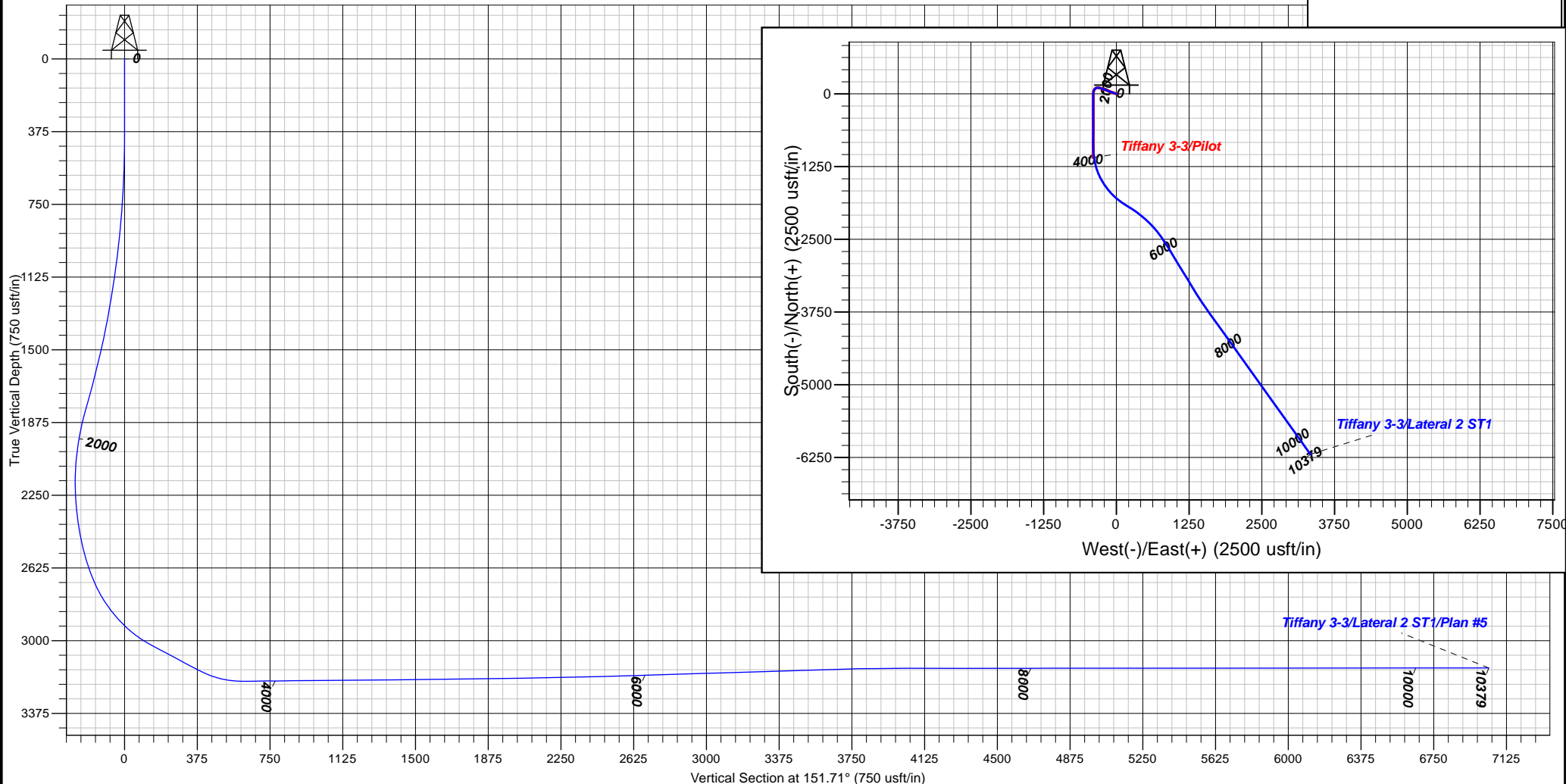
Name	TVD	+N/-S	+E/-W	Northing	Easting
Tiff 3-3 Lat 2 ST1 T1	3145.00	-3499.37	1413.84	1155707.00	2414494.36
Tiff 3-3 Lat 2 ST1 PBHL	3140.00	-6194.11	3333.19	1153012.26	2416413.71

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
3867.00	90.50	178.54	3208.56	-957.27	-397.46	0.00	0.00	654.63	
5037.72	90.51	120.00	3197.30	-1920.35	175.07	5.00	-89.71	1774.02	
5989.17	91.75	148.52	3178.10	-2577.38	849.34	3.00	87.27	2672.10	
7070.75	91.75	148.52	3145.00	-3499.37	1413.84	0.00	0.00	3751.50	Tiff 3-3 Lat 2 ST1 T1
7217.94	90.05	144.45	3142.68	-3622.04	1495.08	3.00	-112.68	3898.02	
10379.30	90.05	144.45	3140.00	-6194.11	3333.19	0.00	0.00	7034.00	Tiff 3-3 Lat 2 ST1 PBHL

FORMATION TOP DETAILS

No formation data is available





**B.P.**

**La Plata County, CO NAD83**

**Tiffany Pad 3**

**Tiffany 3-3**

**Lateral 2 ST1**

**Plan: Plan #5**

## **Standard Planning Report**

**09 August, 2017**





<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well Tiffany 3-3
<b>Company:</b>	B.P.	<b>TVD Reference:</b>	GL 6717.01' & RKB 17' @ 6734.01usft (Aztec 777)
<b>Project:</b>	La Plata County, CO NAD83	<b>MD Reference:</b>	GL 6717.01' & RKB 17' @ 6734.01usft (Aztec 777)
<b>Site:</b>	Tiffany Pad 3	<b>North Reference:</b>	Grid
<b>Well:</b>	Tiffany 3-3	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Lateral 2 ST1		
<b>Design:</b>	Plan #5		

<b>Project</b>	La Plata 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		Tiffany Pad 3			
Site Position:		Northing:	1,159,281.94 usft	Latitude:	37.0867476
From:	Map	Easting:	2,413,119.43 usft	Longitude:	-107.5120251
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	-1.23 °

Well	Tiffany 3-3					
Well Position	+N/-S	-75.57 usft	Northing:	1,159,206.37 usft	Latitude:	37.0865378
	+E/-W	-38.91 usft	Easting:	2,413,080.52 usft	Longitude:	-107.5121528
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,717.01 usft

<b>Wellbore</b>	Lateral 2 ST1				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM	6/9/2017	9.17	63.63	50,125

<b>Design</b>	Plan #5				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN		<b>Tie On Depth:</b>	3,867.00
<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	151.71	

<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
3,867.00	90.50	178.54	3,208.56	-957.27	-397.46	0.00	0.00	0.00	0.00	
5,037.72	90.51	120.00	3,197.30	-1,920.35	175.07	5.00	0.00	-5.00	-89.71	
5,989.17	91.75	148.52	3,178.10	-2,577.38	849.34	3.00	0.13	3.00	87.27	
7,070.75	91.75	148.52	3,145.00	-3,499.37	1,413.84	0.00	0.00	0.00	0.00	Tiff 3-3 Lat 2 ST1 T1
7,217.94	90.05	144.45	3,142.68	-3,622.04	1,495.08	3.00	-1.16	-2.77	-112.68	
10,379.30	90.05	144.45	3,140.00	-6,194.11	3,333.19	0.00	0.00	0.00	0.00	Tiff 3-3 Lat 2 ST1 PB



<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well Tiffany 3-3
<b>Company:</b>	B.P.	<b>TVD Reference:</b>	GL 6717.01' & RKB 17' @ 6734.01usft (Aztec 777)
<b>Project:</b>	La Plata County, CO NAD83	<b>MD Reference:</b>	GL 6717.01' & RKB 17' @ 6734.01usft (Aztec 777)
<b>Site:</b>	Tiffany Pad 3	<b>North Reference:</b>	Grid
<b>Well:</b>	Tiffany 3-3	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Lateral 2 ST1		
<b>Design:</b>	Plan #5		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
3,867.00	90.50	178.54	3,208.56	-957.27	-397.46	654.63	0.00	0.00	0.00
3,900.00	90.50	176.89	3,208.27	-990.24	-396.14	684.29	5.00	0.03	-5.00
4,000.00	90.53	171.89	3,207.38	-1,089.73	-386.37	776.52	5.00	0.02	-5.00
4,100.00	90.54	166.89	3,206.44	-1,187.98	-367.96	871.77	5.00	0.02	-5.00
4,200.00	90.56	161.89	3,205.48	-1,284.26	-341.06	969.30	5.00	0.01	-5.00
4,300.00	90.57	156.89	3,204.49	-1,377.82	-305.87	1,068.37	5.00	0.01	-5.00
4,400.00	90.57	151.89	3,203.49	-1,467.96	-262.65	1,168.22	5.00	0.01	-5.00
4,500.00	90.58	146.89	3,202.49	-1,554.00	-211.75	1,268.10	5.00	0.00	-5.00
4,600.00	90.57	141.89	3,201.49	-1,635.26	-153.54	1,367.25	5.00	0.00	-5.00
4,700.00	90.57	136.89	3,200.49	-1,711.15	-88.47	1,464.91	5.00	-0.01	-5.00
4,800.00	90.55	131.89	3,199.51	-1,781.07	-17.03	1,560.33	5.00	-0.01	-5.00
4,900.00	90.54	126.89	3,198.56	-1,844.50	60.23	1,652.80	5.00	-0.02	-5.00
5,000.00	90.52	121.89	3,197.63	-1,900.96	142.73	1,741.61	5.00	-0.02	-5.00
5,037.72	90.51	120.00	3,197.30	-1,920.35	175.07	1,774.02	5.00	-0.02	-5.00
5,100.00	90.60	121.87	3,196.69	-1,952.36	228.49	1,827.52	3.00	0.14	3.00
5,200.00	90.74	124.86	3,195.52	-2,007.35	311.99	1,915.51	3.00	0.14	3.00
5,300.00	90.88	127.86	3,194.11	-2,066.63	392.51	2,005.86	3.00	0.14	3.00
5,400.00	91.02	130.86	3,192.46	-2,130.03	469.81	2,098.32	3.00	0.14	3.00
5,500.00	91.15	133.86	3,190.57	-2,197.38	543.68	2,192.64	3.00	0.13	3.00
5,600.00	91.28	136.85	3,188.44	-2,268.50	613.93	2,288.56	3.00	0.13	3.00
5,700.00	91.41	139.85	3,186.10	-2,343.20	680.36	2,385.81	3.00	0.13	3.00
5,800.00	91.53	142.85	3,183.53	-2,421.26	742.79	2,484.14	3.00	0.12	3.00
5,900.00	91.65	145.85	3,180.75	-2,502.48	801.04	2,583.26	3.00	0.12	3.00
5,989.17	91.75	148.52	3,178.10	-2,577.38	849.34	2,672.10	3.00	0.12	3.00
6,000.00	91.75	148.52	3,177.77	-2,586.61	854.99	2,682.91	0.00	0.00	0.00
6,100.00	91.75	148.52	3,174.71	-2,671.86	907.18	2,782.71	0.00	0.00	0.00
6,200.00	91.75	148.52	3,171.65	-2,757.10	959.38	2,882.51	0.00	0.00	0.00
6,300.00	91.75	148.52	3,168.59	-2,842.35	1,011.57	2,982.31	0.00	0.00	0.00
6,400.00	91.75	148.52	3,165.53	-2,927.59	1,063.76	3,082.11	0.00	0.00	0.00
6,500.00	91.75	148.52	3,162.47	-3,012.84	1,115.95	3,181.90	0.00	0.00	0.00
6,600.00	91.75	148.52	3,159.41	-3,098.08	1,168.14	3,281.70	0.00	0.00	0.00
6,700.00	91.75	148.52	3,156.35	-3,183.32	1,220.34	3,381.50	0.00	0.00	0.00
6,800.00	91.75	148.52	3,153.29	-3,268.57	1,272.53	3,481.30	0.00	0.00	0.00
6,900.00	91.75	148.52	3,150.23	-3,353.81	1,324.72	3,581.10	0.00	0.00	0.00
7,000.00	91.75	148.52	3,147.17	-3,439.06	1,376.91	3,680.89	0.00	0.00	0.00
7,070.75	91.75	148.52	3,145.00	-3,499.37	1,413.84	3,751.50	0.00	0.00	0.00
Tiff 3-3 Lat 2 ST1 T1									
7,100.00	91.42	147.71	3,144.19	-3,524.20	1,429.28	3,780.68	3.00	-1.16	-2.77
7,200.00	90.26	144.95	3,142.73	-3,607.40	1,484.71	3,880.22	3.00	-1.16	-2.77
7,217.94	90.05	144.45	3,142.68	-3,622.04	1,495.08	3,898.02	3.00	-1.16	-2.77
7,300.00	90.05	144.45	3,142.61	-3,688.81	1,542.79	3,979.43	0.00	0.00	0.00
7,400.00	90.05	144.45	3,142.53	-3,770.17	1,600.93	4,078.62	0.00	0.00	0.00
7,500.00	90.05	144.45	3,142.44	-3,851.52	1,659.08	4,177.82	0.00	0.00	0.00
7,600.00	90.05	144.45	3,142.36	-3,932.88	1,717.22	4,277.02	0.00	0.00	0.00
7,700.00	90.05	144.45	3,142.27	-4,014.24	1,775.36	4,376.21	0.00	0.00	0.00
7,800.00	90.05	144.45	3,142.19	-4,095.60	1,833.51	4,475.41	0.00	0.00	0.00
7,900.00	90.05	144.45	3,142.10	-4,176.96	1,891.65	4,574.61	0.00	0.00	0.00
8,000.00	90.05	144.45	3,142.02	-4,258.32	1,949.79	4,673.81	0.00	0.00	0.00
8,100.00	90.05	144.45	3,141.94	-4,339.68	2,007.93	4,773.00	0.00	0.00	0.00
8,200.00	90.05	144.45	3,141.85	-4,421.04	2,066.08	4,872.20	0.00	0.00	0.00
8,300.00	90.05	144.45	3,141.77	-4,502.40	2,124.22	4,971.40	0.00	0.00	0.00
8,400.00	90.05	144.45	3,141.68	-4,583.76	2,182.36	5,070.59	0.00	0.00	0.00



<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well Tiffany 3-3
<b>Company:</b>	B.P.	<b>TVD Reference:</b>	GL 6717.01' & RKB 17' @ 6734.01usft (Aztec 777)
<b>Project:</b>	La Plata County, CO NAD83	<b>MD Reference:</b>	GL 6717.01' & RKB 17' @ 6734.01usft (Aztec 777)
<b>Site:</b>	Tiffany Pad 3	<b>North Reference:</b>	Grid
<b>Well:</b>	Tiffany 3-3	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Lateral 2 ST1		
<b>Design:</b>	Plan #5		

Planned Survey										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
8,500.00	90.05	144.45	3,141.60	-4,665.12	2,240.51	5,169.79	0.00	0.00	0.00	
8,600.00	90.05	144.45	3,141.51	-4,746.48	2,298.65	5,268.99	0.00	0.00	0.00	
8,700.00	90.05	144.45	3,141.43	-4,827.84	2,356.79	5,368.18	0.00	0.00	0.00	
8,800.00	90.05	144.45	3,141.34	-4,909.20	2,414.94	5,467.38	0.00	0.00	0.00	
8,900.00	90.05	144.45	3,141.26	-4,990.56	2,473.08	5,566.58	0.00	0.00	0.00	
9,000.00	90.05	144.45	3,141.17	-5,071.92	2,531.22	5,665.78	0.00	0.00	0.00	
9,100.00	90.05	144.45	3,141.09	-5,153.28	2,589.36	5,764.97	0.00	0.00	0.00	
9,200.00	90.05	144.45	3,141.00	-5,234.64	2,647.51	5,864.17	0.00	0.00	0.00	
9,300.00	90.05	144.45	3,140.92	-5,316.00	2,705.65	5,963.37	0.00	0.00	0.00	
9,400.00	90.05	144.45	3,140.83	-5,397.36	2,763.79	6,062.56	0.00	0.00	0.00	
9,500.00	90.05	144.45	3,140.75	-5,478.72	2,821.94	6,161.76	0.00	0.00	0.00	
9,600.00	90.05	144.45	3,140.66	-5,560.08	2,880.08	6,260.96	0.00	0.00	0.00	
9,700.00	90.05	144.45	3,140.58	-5,641.44	2,938.22	6,360.16	0.00	0.00	0.00	
9,800.00	90.05	144.45	3,140.49	-5,722.80	2,996.37	6,459.35	0.00	0.00	0.00	
9,900.00	90.05	144.45	3,140.41	-5,804.16	3,054.51	6,558.55	0.00	0.00	0.00	
10,000.00	90.05	144.45	3,140.32	-5,885.52	3,112.65	6,657.75	0.00	0.00	0.00	
10,100.00	90.05	144.45	3,140.24	-5,966.87	3,170.79	6,756.94	0.00	0.00	0.00	
10,200.00	90.05	144.45	3,140.15	-6,048.23	3,228.94	6,856.14	0.00	0.00	0.00	
10,300.00	90.05	144.45	3,140.07	-6,129.59	3,287.08	6,955.34	0.00	0.00	0.00	
10,379.30	90.05	144.45	3,140.00	-6,194.11	3,333.19	7,034.00	0.00	0.00	0.00	
Tiff 3-3 Lat 2 ST1 PBHL										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
Tiff 3-3 Lat 2 ST1 PBHL	0.00	360.00	3,140.00	-6,194.11	3,333.19	1,153,012.25	2,416,413.71	37.0697269	-107.5002744	
- hit/miss target										
- Shape										
- plan hits target center										
- Point										
Tiff 3-3 Lat 2 ST1 T1	0.00	360.00	3,145.00	-3,499.37	1,413.84	1,155,707.00	2,414,494.36	37.0770129	-107.5070495	
- hit/miss target										
- Shape										
- plan hits target center										
- Point										