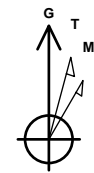




Company: B.P.  
Project: La Plata County, CO NAD83  
Site: Tiffany Pad 3  
Well: Tiffany 3-3  
Wellbore: Lateral 2  
Design: Plan #5

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)

Created By: Janie Collins Date: 14:49, August 09 2017

DESIGN TARGET DETAILS

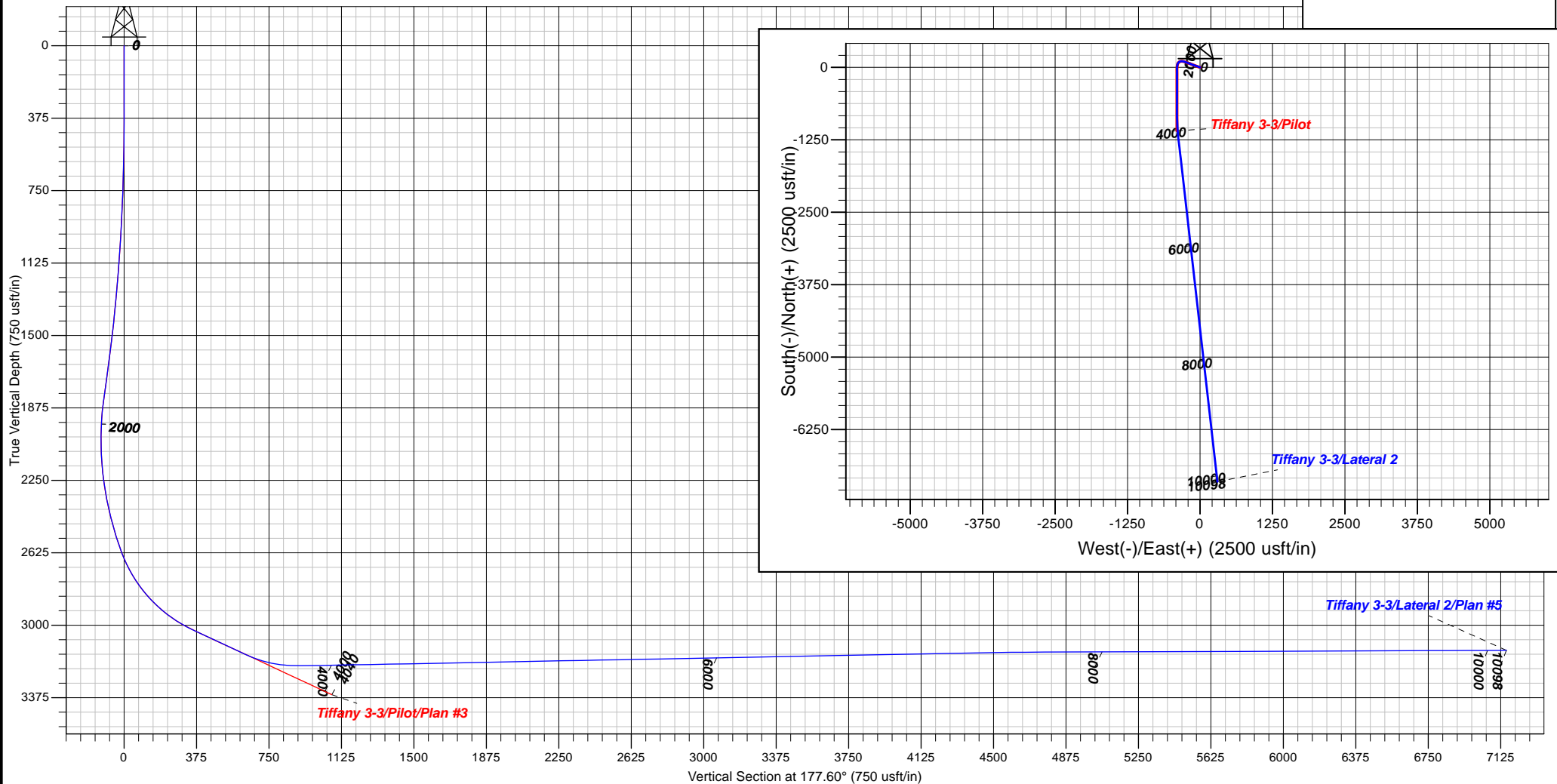
Name	TVD	+N/-S	+E/-W	Northing	Easting
Tiff 3-3 Lat 2 T1	3140.00	-4567.29	6.15	1154639.08	2413086.67
Tiff 3-3 Lat 2 PBHL REV	3130.00	-7148.18	300.00	1152058.19	2413380.52

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
3550.00	65.00	180.00	3152.11	-648.59	-398.08	0.00	0.00	631.33	
3817.94	90.32	180.00	3208.91	-908.22	-398.08	9.45	0.00	890.72	
4036.00	91.10	173.50	3206.22	-1125.79	-385.74	3.00	-83.16	1108.63	
7500.37	91.10	173.50	3140.00	-4567.29	6.15	0.00	0.00	4563.53	Tiff 3-3 Lat 2 T1
7529.69	90.22	173.50	3139.66	-4596.42	9.47	3.00	179.94	4592.77	
10097.95	90.22	173.50	3130.00	-7148.18	300.00	0.00	0.00	7154.47	Tiff 3-3 Lat 2 PBHL REV

FORMATION TOP DETAILS

No formation data is available





**B.P.**

**La Plata County, CO NAD83**

**Tiffany Pad 3**

**Tiffany 3-3**

**Lateral 2**

**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		
<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				
<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>	3,550.00
<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	177.60	

<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
3,550.00	65.00	180.00	3,152.11	-648.59	-398.08	0.00	0.00	0.00	0.00	
3,817.94	90.32	180.00	3,208.91	-908.22	-398.08	9.45	9.45	0.00	0.00	
4,036.00	91.10	173.50	3,206.22	-1,125.79	-385.74	3.00	0.36	-2.98	-83.16	
7,500.37	91.10	173.50	3,140.00	-4,567.29	6.15	0.00	0.00	0.00	0.00	Tiff 3-3 Lat 2 T1
7,529.69	90.22	173.50	3,139.66	-4,596.42	9.47	3.00	-3.00	0.00	179.94	
10,097.95	90.22	173.50	3,130.00	-7,148.18	300.00	0.00	0.00	0.00	0.00	Tiff 3-3 Lat 2 PBHL RI



<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		
<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)
3,550.00	65.00	180.00	3,152.11	-648.59	-398.08	631.33	0.00	0.00	0.00
3,600.00	69.73	180.00	3,171.35	-694.73	-398.08	677.43	9.45	9.45	0.00
3,700.00	79.18	180.00	3,198.13	-790.96	-398.08	773.57	9.45	9.45	0.00
3,800.00	88.63	180.00	3,208.75	-890.28	-398.08	872.81	9.45	9.45	0.00
3,817.94	90.32	180.00	3,208.91	-908.22	-398.08	890.72	9.45	9.45	0.00
3,900.00	90.61	177.56	3,208.24	-990.25	-396.33	972.76	3.00	0.36	-2.98
4,000.00	90.97	174.58	3,206.86	-1,090.00	-389.47	1,072.71	3.00	0.36	-2.98
4,036.00	91.10	173.50	3,206.22	-1,125.79	-385.74	1,108.63	3.00	0.35	-2.98
4,100.00	91.10	173.50	3,204.99	-1,189.37	-378.50	1,172.45	0.00	0.00	0.00
4,200.00	91.10	173.50	3,203.08	-1,288.71	-367.19	1,272.18	0.00	0.00	0.00
4,300.00	91.10	173.50	3,201.17	-1,388.05	-355.87	1,371.91	0.00	0.00	0.00
4,400.00	91.10	173.50	3,199.26	-1,487.39	-344.56	1,471.63	0.00	0.00	0.00
4,500.00	91.10	173.50	3,197.35	-1,586.73	-333.25	1,571.36	0.00	0.00	0.00
4,600.00	91.10	173.50	3,195.44	-1,686.07	-321.94	1,671.09	0.00	0.00	0.00
4,700.00	91.10	173.50	3,193.52	-1,785.41	-310.63	1,770.81	0.00	0.00	0.00
4,800.00	91.10	173.50	3,191.61	-1,884.75	-299.31	1,870.54	0.00	0.00	0.00
4,900.00	91.10	173.50	3,189.70	-1,984.09	-288.00	1,970.27	0.00	0.00	0.00
5,000.00	91.10	173.50	3,187.79	-2,083.43	-276.69	2,069.99	0.00	0.00	0.00
5,100.00	91.10	173.50	3,185.88	-2,182.77	-265.38	2,169.72	0.00	0.00	0.00
5,200.00	91.10	173.50	3,183.97	-2,282.11	-254.07	2,269.45	0.00	0.00	0.00
5,300.00	91.10	173.50	3,182.06	-2,381.45	-242.75	2,369.18	0.00	0.00	0.00
5,400.00	91.10	173.50	3,180.14	-2,480.79	-231.44	2,468.90	0.00	0.00	0.00
5,500.00	91.10	173.50	3,178.23	-2,580.13	-220.13	2,568.63	0.00	0.00	0.00
5,600.00	91.10	173.50	3,176.32	-2,679.47	-208.82	2,668.36	0.00	0.00	0.00
5,700.00	91.10	173.50	3,174.41	-2,778.81	-197.51	2,768.08	0.00	0.00	0.00
5,800.00	91.10	173.50	3,172.50	-2,878.15	-186.19	2,867.81	0.00	0.00	0.00
5,900.00	91.10	173.50	3,170.59	-2,977.49	-174.88	2,967.54	0.00	0.00	0.00
6,000.00	91.10	173.50	3,168.68	-3,076.83	-163.57	3,067.26	0.00	0.00	0.00
6,100.00	91.10	173.50	3,166.77	-3,176.17	-152.26	3,166.99	0.00	0.00	0.00
6,200.00	91.10	173.50	3,164.85	-3,275.51	-140.95	3,266.72	0.00	0.00	0.00
6,300.00	91.10	173.50	3,162.94	-3,374.85	-129.64	3,366.44	0.00	0.00	0.00
6,400.00	91.10	173.50	3,161.03	-3,474.19	-118.32	3,466.17	0.00	0.00	0.00
6,500.00	91.10	173.50	3,159.12	-3,573.53	-107.01	3,565.90	0.00	0.00	0.00
6,600.00	91.10	173.50	3,157.21	-3,672.87	-95.70	3,665.62	0.00	0.00	0.00
6,700.00	91.10	173.50	3,155.30	-3,772.21	-84.39	3,765.35	0.00	0.00	0.00
6,800.00	91.10	173.50	3,153.39	-3,871.55	-73.08	3,865.08	0.00	0.00	0.00
6,900.00	91.10	173.50	3,151.48	-3,970.88	-61.76	3,964.80	0.00	0.00	0.00
7,000.00	91.10	173.50	3,149.56	-4,070.22	-50.45	4,064.53	0.00	0.00	0.00
7,100.00	91.10	173.50	3,147.65	-4,169.56	-39.14	4,164.26	0.00	0.00	0.00
7,200.00	91.10	173.50	3,145.74	-4,268.90	-27.83	4,263.98	0.00	0.00	0.00
7,300.00	91.10	173.50	3,143.83	-4,368.24	-16.52	4,363.71	0.00	0.00	0.00
7,400.00	91.10	173.50	3,141.92	-4,467.58	-5.20	4,463.44	0.00	0.00	0.00
7,500.00	91.10	173.50	3,140.01	-4,566.92	6.11	4,563.16	0.00	0.00	0.00
7,500.37	91.10	173.50	3,140.00	-4,567.29	6.15	4,563.53	0.00	0.00	0.00
<b>Tiff 3-3 Lat 2 T1</b>									
7,529.69	90.22	173.50	3,139.66	-4,596.42	9.47	4,592.77	3.00	-3.00	0.00
7,600.00	90.22	173.50	3,139.40	-4,666.28	17.42	4,662.91	0.00	0.00	0.00
7,700.00	90.22	173.50	3,139.02	-4,765.64	28.73	4,762.65	0.00	0.00	0.00
7,800.00	90.22	173.50	3,138.65	-4,864.99	40.05	4,862.39	0.00	0.00	0.00
7,900.00	90.22	173.50	3,138.27	-4,964.35	51.36	4,962.14	0.00	0.00	0.00
8,000.00	90.22	173.50	3,137.89	-5,063.71	62.67	5,061.88	0.00	0.00	0.00
8,100.00	90.22	173.50	3,137.52	-5,163.07	73.98	5,161.63	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		
<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)
8,200.00	90.22	173.50	3,137.14	-5,262.42	85.30	5,261.37	0.00	0.00	0.00
8,300.00	90.22	173.50	3,136.77	-5,361.78	96.61	5,361.12	0.00	0.00	0.00
8,400.00	90.22	173.50	3,136.39	-5,461.14	107.92	5,460.86	0.00	0.00	0.00
8,500.00	90.22	173.50	3,136.01	-5,560.50	119.23	5,560.60	0.00	0.00	0.00
8,600.00	90.22	173.50	3,135.64	-5,659.85	130.55	5,660.35	0.00	0.00	0.00
8,700.00	90.22	173.50	3,135.26	-5,759.21	141.86	5,760.09	0.00	0.00	0.00
8,800.00	90.22	173.50	3,134.88	-5,858.57	153.17	5,859.84	0.00	0.00	0.00
8,900.00	90.22	173.50	3,134.51	-5,957.92	164.48	5,959.58	0.00	0.00	0.00
9,000.00	90.22	173.50	3,134.13	-6,057.28	175.79	6,059.33	0.00	0.00	0.00
9,100.00	90.22	173.50	3,133.76	-6,156.64	187.11	6,159.07	0.00	0.00	0.00
9,200.00	90.22	173.50	3,133.38	-6,256.00	198.42	6,258.81	0.00	0.00	0.00
9,300.00	90.22	173.50	3,133.00	-6,355.35	209.73	6,358.56	0.00	0.00	0.00
9,400.00	90.22	173.50	3,132.63	-6,454.71	221.04	6,458.30	0.00	0.00	0.00
9,500.00	90.22	173.50	3,132.25	-6,554.07	232.36	6,558.05	0.00	0.00	0.00
9,600.00	90.22	173.50	3,131.87	-6,653.43	243.67	6,657.79	0.00	0.00	0.00
9,700.00	90.22	173.50	3,131.50	-6,752.78	254.98	6,757.54	0.00	0.00	0.00
9,800.00	90.22	173.50	3,131.12	-6,852.14	266.29	6,857.28	0.00	0.00	0.00
9,900.00	90.22	173.50	3,130.74	-6,951.50	277.61	6,957.02	0.00	0.00	0.00
10,000.00	90.22	173.50	3,130.37	-7,050.86	288.92	7,056.77	0.00	0.00	0.00
10,097.95	90.22	173.50	3,130.00	-7,148.18	300.00	7,154.47	0.00	0.00	0.00
Tiff 3-3 Lat 2 PBHL REV - Tiff 3-3 Lat 2 PBHL									

**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
Tiff 3-3 Lat 2 PBHL REV - plan hits target center - Point	0.00	360.00	3,130.00	-7,148.18	300.00	1,152,058.19	2,413,380.52	37.0669284	-107.5105973
Tiff 3-3 Lat 2 T1 - plan hits target center - Point	0.00	360.00	3,140.00	-4,567.29	6.15	1,154,639.08	2,413,086.67	37.0739975	-107.5117946