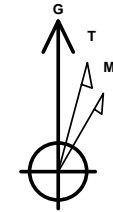




Company: B.P.  
Project: La Plata County, CO NAD83  
Site: Tiffany Pad 2  
Well: Tiffany 2-3  
Wellbore: Lateral 3  
Design: Plan #2

# 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: 1.24°  
Magnetic North: 10.53°

Magnetic Field  
Strength: 50251.6snT  
Dip Angle: 63.65°  
Date: 4/6/2016  
Model: HDGM

## WELL DETAILS: Tiffany 2-3

GL 6669.66' & RKB 11' @ 6680.66usft (Aztec 507)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1163311.22	2408584.27	37.0975416	-107.5278681

Tiffany 2-3

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

Created By: Janie Collins Date: 16:33, April 21 2016

## DESIGN TARGET DETAILS

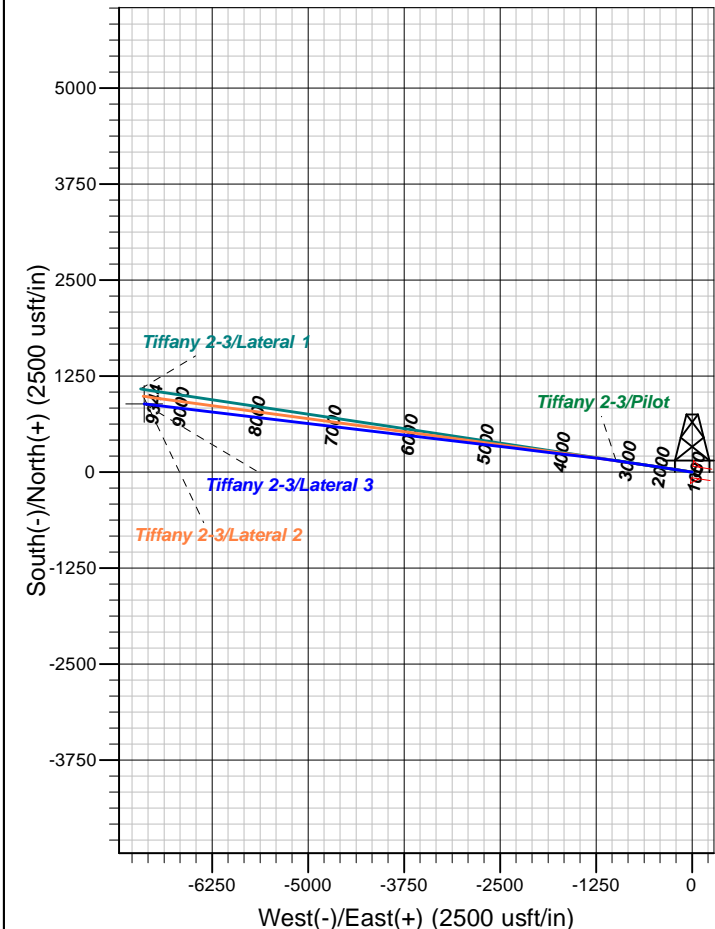
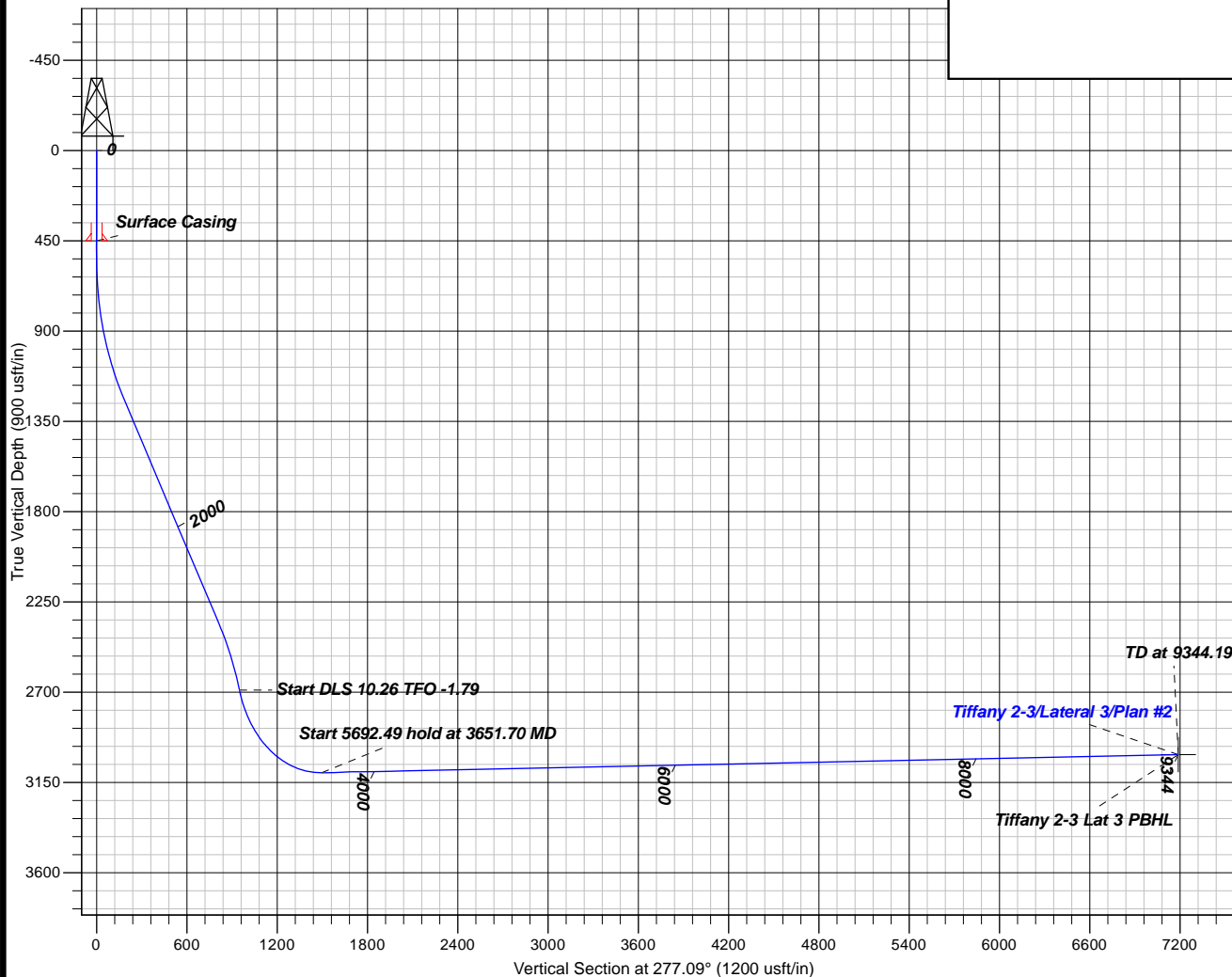
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Tiffany 2-3 Lat 3 PBHL	3011.00	887.87	-7133.62	1164199.09	2401450.65	37.0995516	-107.5523871

## SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
2914.18	15.24	278.57	2689.40	141.56	-939.00	0.00	0.00	949.29	
3651.70	90.91	276.84	3101.00	210.19	-1482.33	10.26	-1.79	1496.94	
9344.19	90.91	276.84	3011.00	887.87	-7133.62	0.00	0.00	7188.66	Tiffany 2-3 Lat 3 PBHL

## FORMATION TOP DETAILS

No formation data is available





**B.P.**

La Plata County, CO NAD83

Tiffany Pad 2

Tiffany 2-3 - Slot Tiffany 2-3

Lateral 3

Plan: Plan #2

## **Standard Planning Report**

21 April, 2016





<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well Tiffany 2-3 - Slot Tiffany 2-3
<b>Company:</b>	B.P.	<b>TVD Reference:</b>	GL 6669.66' & RKB 11' @ 6680.66usft (Aztec 507)
<b>Project:</b>	La Plata County, CO NAD83	<b>MD Reference:</b>	GL 6669.66' & RKB 11' @ 6680.66usft (Aztec 507)
<b>Site:</b>	Tiffany Pad 2	<b>North Reference:</b>	Grid
<b>Well:</b>	Tiffany 2-3	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Lateral 3		
<b>Design:</b>	Plan #2		

<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 2			
Site Position:		Northing:	1,163,257.22 usft	Latitude:	37.0973972
From:	Map	Easting:	2,408,649.91 usft	Longitude:	-107.5276391
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	-1.24 °

Well	Tiffany 2-3 - Slot Tiffany 2-3					
Well Position	+N/-S	54.00 usft	Northing:	1,163,311.22 usft	Latitude:	37.0975416
	+E/-W	-65.64 usft	Easting:	2,408,584.27 usft	Longitude:	-107.5278681
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,669.66 usft

<b>Wellbore</b>	Lateral 3				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM	4/6/2016	9.28	63.65	50,252

<b>Design</b>	Plan #2				
<b>Audit Notes:</b>					
<b>Version:</b>	<b>Phase:</b>	PLAN		<b>Tie On Depth:</b>	2,914.18
<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	277.09	

<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
2,914.18	15.24	278.57	2,689.40	141.56	-939.00	0.00	0.00	0.00	0.00	
3,651.70	90.91	276.84	3,101.00	210.19	-1,482.33	10.26	10.26	-0.24	-1.79	
9,344.19	90.91	276.84	3,011.00	887.87	-7,133.62	0.00	0.00	0.00	0.00	Tiffany 2-3 Lat 3 PBH



<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well Tiffany 2-3 - Slot Tiffany 2-3
<b>Company:</b>	B.P.	<b>TVD Reference:</b>	GL 6669.66' & RKB 11' @ 6680.66usft (Aztec 507)
<b>Project:</b>	La Plata County, CO NAD83	<b>MD Reference:</b>	GL 6669.66' & RKB 11' @ 6680.66usft (Aztec 507)
<b>Site:</b>	Tiffany Pad 2	<b>North Reference:</b>	Grid
<b>Well:</b>	Tiffany 2-3	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Lateral 3		
<b>Design:</b>	Plan #2		

## 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)
2,914.18	15.24	278.57	2,689.40	141.56	-939.00	949.29	0.00	0.00	0.00
3,000.00	24.05	277.90	2,770.15	145.65	-967.53	978.11	10.26	10.26	-0.78
3,100.00	34.30	277.54	2,857.35	152.16	-1,015.77	1,026.79	10.26	10.26	-0.37
3,200.00	44.56	277.32	2,934.48	160.35	-1,078.68	1,090.22	10.26	10.26	-0.21
3,300.00	54.82	277.18	2,999.08	169.96	-1,154.23	1,166.38	10.26	10.26	-0.15
3,400.00	65.08	277.06	3,049.09	180.67	-1,240.00	1,252.83	10.26	10.26	-0.11
3,500.00	75.34	276.97	3,082.90	192.15	-1,333.27	1,346.79	10.26	10.26	-0.10
3,600.00	85.60	276.88	3,099.43	204.02	-1,431.04	1,445.28	10.26	10.26	-0.09
3,651.70	90.91	276.84	3,101.00	210.19	-1,482.33	1,496.94	10.26	10.26	-0.08
3,700.00	90.91	276.84	3,100.24	215.94	-1,530.28	1,545.23	0.00	0.00	0.00
3,800.00	90.91	276.84	3,098.66	227.84	-1,629.56	1,645.22	0.00	0.00	0.00
3,900.00	90.91	276.84	3,097.08	239.75	-1,728.83	1,745.21	0.00	0.00	0.00
4,000.00	90.91	276.84	3,095.50	251.65	-1,828.11	1,845.19	0.00	0.00	0.00
4,100.00	90.91	276.84	3,093.92	263.56	-1,927.38	1,945.18	0.00	0.00	0.00
4,200.00	90.91	276.84	3,092.33	275.46	-2,026.66	2,045.17	0.00	0.00	0.00
4,300.00	90.91	276.84	3,090.75	287.37	-2,125.94	2,145.15	0.00	0.00	0.00
4,400.00	90.91	276.84	3,089.17	299.27	-2,225.21	2,245.14	0.00	0.00	0.00
4,500.00	90.91	276.84	3,087.59	311.18	-2,324.49	2,345.13	0.00	0.00	0.00
4,600.00	90.91	276.84	3,086.01	323.08	-2,423.77	2,445.11	0.00	0.00	0.00
4,700.00	90.91	276.84	3,084.43	334.99	-2,523.04	2,545.10	0.00	0.00	0.00
4,800.00	90.91	276.84	3,082.85	346.89	-2,622.32	2,645.08	0.00	0.00	0.00
4,900.00	90.91	276.84	3,081.27	358.80	-2,721.59	2,745.07	0.00	0.00	0.00
5,000.00	90.91	276.84	3,079.69	370.70	-2,820.87	2,845.06	0.00	0.00	0.00
5,100.00	90.91	276.84	3,078.10	382.61	-2,920.15	2,945.04	0.00	0.00	0.00
5,200.00	90.91	276.84	3,076.52	394.51	-3,019.42	3,045.03	0.00	0.00	0.00
5,300.00	90.91	276.84	3,074.94	406.42	-3,118.70	3,145.02	0.00	0.00	0.00
5,400.00	90.91	276.84	3,073.36	418.32	-3,217.98	3,245.00	0.00	0.00	0.00
5,500.00	90.91	276.84	3,071.78	430.23	-3,317.25	3,344.99	0.00	0.00	0.00
5,600.00	90.91	276.84	3,070.20	442.13	-3,416.53	3,444.98	0.00	0.00	0.00
5,700.00	90.91	276.84	3,068.62	454.04	-3,515.80	3,544.96	0.00	0.00	0.00
5,800.00	90.91	276.84	3,067.04	465.94	-3,615.08	3,644.95	0.00	0.00	0.00
5,900.00	90.91	276.84	3,065.46	477.85	-3,714.36	3,744.94	0.00	0.00	0.00
6,000.00	90.91	276.84	3,063.88	489.75	-3,813.63	3,844.92	0.00	0.00	0.00
6,100.00	90.91	276.84	3,062.29	501.65	-3,912.91	3,944.91	0.00	0.00	0.00
6,200.00	90.91	276.84	3,060.71	513.56	-4,012.19	4,044.90	0.00	0.00	0.00
6,300.00	90.91	276.84	3,059.13	525.46	-4,111.46	4,144.88	0.00	0.00	0.00
6,400.00	90.91	276.84	3,057.55	537.37	-4,210.74	4,244.87	0.00	0.00	0.00
6,500.00	90.91	276.84	3,055.97	549.27	-4,310.01	4,344.85	0.00	0.00	0.00
6,600.00	90.91	276.84	3,054.39	561.18	-4,409.29	4,444.84	0.00	0.00	0.00
6,700.00	90.91	276.84	3,052.81	573.08	-4,508.57	4,544.83	0.00	0.00	0.00
6,800.00	90.91	276.84	3,051.23	584.99	-4,607.84	4,644.81	0.00	0.00	0.00
6,900.00	90.91	276.84	3,049.65	596.89	-4,707.12	4,744.80	0.00	0.00	0.00
7,000.00	90.91	276.84	3,048.06	608.80	-4,806.40	4,844.79	0.00	0.00	0.00
7,100.00	90.91	276.84	3,046.48	620.70	-4,905.67	4,944.77	0.00	0.00	0.00
7,200.00	90.91	276.84	3,044.90	632.61	-5,004.95	5,044.76	0.00	0.00	0.00
7,300.00	90.91	276.84	3,043.32	644.51	-5,104.22	5,144.75	0.00	0.00	0.00
7,400.00	90.91	276.84	3,041.74	656.42	-5,203.50	5,244.73	0.00	0.00	0.00
7,500.00	90.91	276.84	3,040.16	668.32	-5,302.78	5,344.72	0.00	0.00	0.00
7,600.00	90.91	276.84	3,038.58	680.23	-5,402.05	5,444.71	0.00	0.00	0.00
7,700.00	90.91	276.84	3,037.00	692.13	-5,501.33	5,544.69	0.00	0.00	0.00
7,800.00	90.91	276.84	3,035.42	704.04	-5,600.61	5,644.68	0.00	0.00	0.00
7,900.00	90.91	276.84	3,033.83	715.94	-5,699.88	5,744.67	0.00	0.00	0.00



<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well Tiffany 2-3 - Slot Tiffany 2-3
<b>Company:</b>	B.P.	<b>TVD Reference:</b>	GL 6669.66' & RKB 11' @ 6680.66usft (Aztec 507)
<b>Project:</b>	La Plata County, CO NAD83	<b>MD Reference:</b>	GL 6669.66' & RKB 11' @ 6680.66usft (Aztec 507)
<b>Site:</b>	Tiffany Pad 2	<b>North Reference:</b>	Grid
<b>Well:</b>	Tiffany 2-3	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Lateral 3		
<b>Design:</b>	Plan #2		

**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)
8,000.00	90.91	276.84	3,032.25	727.85	-5,799.16	5,844.65	0.00	0.00	0.00
8,100.00	90.91	276.84	3,030.67	739.75	-5,898.43	5,944.64	0.00	0.00	0.00
8,200.00	90.91	276.84	3,029.09	751.66	-5,997.71	6,044.63	0.00	0.00	0.00
8,300.00	90.91	276.84	3,027.51	763.56	-6,096.99	6,144.61	0.00	0.00	0.00
8,400.00	90.91	276.84	3,025.93	775.47	-6,196.26	6,244.60	0.00	0.00	0.00
8,500.00	90.91	276.84	3,024.35	787.37	-6,295.54	6,344.58	0.00	0.00	0.00
8,600.00	90.91	276.84	3,022.77	799.28	-6,394.82	6,444.57	0.00	0.00	0.00
8,700.00	90.91	276.84	3,021.19	811.18	-6,494.09	6,544.56	0.00	0.00	0.00
8,800.00	90.91	276.84	3,019.60	823.09	-6,593.37	6,644.54	0.00	0.00	0.00
8,900.00	90.91	276.84	3,018.02	834.99	-6,692.64	6,744.53	0.00	0.00	0.00
9,000.00	90.91	276.84	3,016.44	846.89	-6,791.92	6,844.52	0.00	0.00	0.00
9,100.00	90.91	276.84	3,014.86	858.80	-6,891.20	6,944.50	0.00	0.00	0.00
9,200.00	90.91	276.84	3,013.28	870.70	-6,990.47	7,044.49	0.00	0.00	0.00
9,300.00	90.91	276.84	3,011.70	882.61	-7,089.75	7,144.48	0.00	0.00	0.00
9,344.19	90.91	276.84	3,011.00	887.87	-7,133.62	7,188.66	0.00	0.00	0.00
Tiffany 2-3 Lat 3 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
Tiffany 2-3 Lat 3 PBHL - plan hits target center - Point	0.00	360.00	3,011.00	887.87	-7,133.62	1,164,199.09	2,401,450.65	37.0995516	-107.5523872

**Casing Points**

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
450.00	450.00	Surface Casing	8.62	12.25