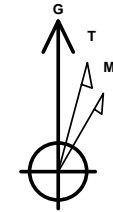




Company: B.P.
Project: La Plata County, CO NAD83
Site: Tiffany Pad 2
Well: Tiffany 2-2
Wellbore: Lateral 1 ST1
Design: Plan #1

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: 50250.9nT
Dip Angle: 63.65°
Date: 4/6/2016
Model: HDGM

WELL DETAILS: Tiffany 2-2

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

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1163284.22	2408617.09	37.0974694	-107.5277536

Tiffany 2-2

Plan: Plan #1 (Tiffany 2-2/Lateral 1 ST1)

Created By: Janie Collins Date: 11:58, April 07 2016

DESIGN TARGET DETAILS

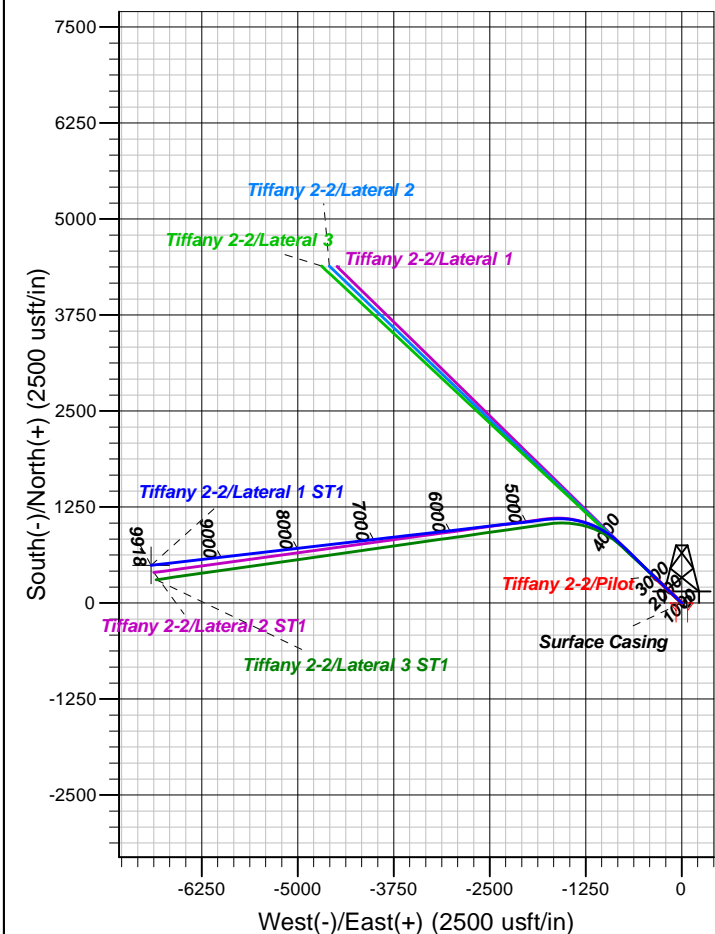
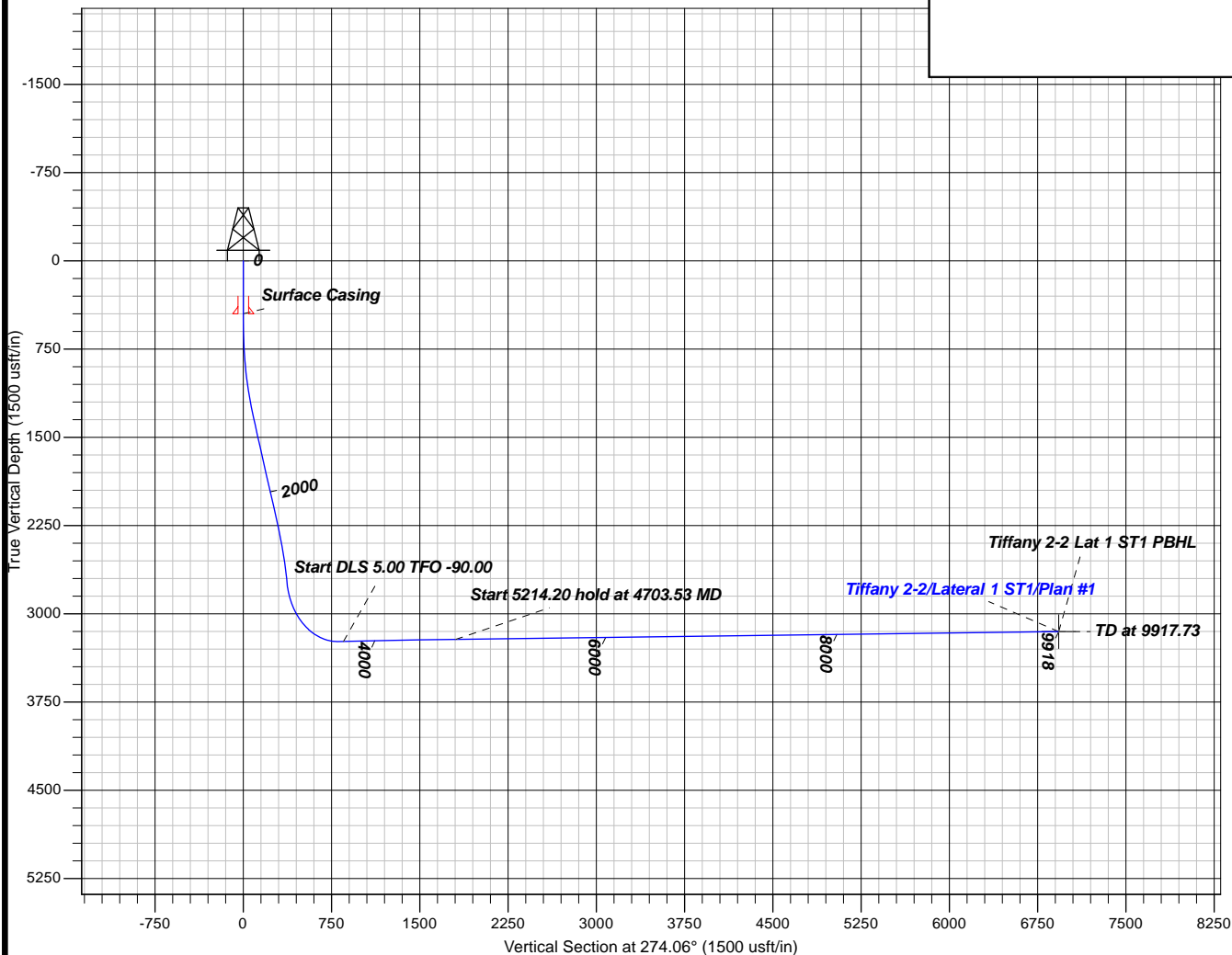
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Tiffany 2-2 Lat 1 ST1 PBHL	3151.00	490.96	-6909.92	1163775.18	2401707.17	37.0984032	-107.5514759

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
3684.00	91.15	314.38	3235.09	771.64	-797.75	0.00	0.00	850.44	
4703.53	90.73	263.39	3217.15	1090.77	-1730.75	5.00	-90.00	1803.71	
9917.73	90.73	263.39	3151.00	490.96	-6909.92	0.00	0.00	6927.34	Tiffany 2-2 Lat 1 ST1 PBHL

FORMATION TOP DETAILS

No formation data is available





B.P.

La Plata County, CO NAD83

Tiffany Pad 2

Tiffany 2-2 - Slot Tiffany 2-2

Lateral 1 ST1

Plan: Plan #1

Standard Planning Report

07 April, 2016





Database:	Grand Junction District	Local Co-ordinate Reference:	Well Tiffany 2-2 - Slot Tiffany 2-2
Company:	B.P.	TVD Reference:	GL 6669.66' & RKB 11' @ 6680.66usft (Aztec 507)
Project:	La Plata County, CO NAD83	MD Reference:	GL 6669.66' & RKB 11' @ 6680.66usft (Aztec 507)
Site:	Tiffany Pad 2	North Reference:	Grid
Well:	Tiffany 2-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 1 ST1		
Design:	Plan #1		

Project	La Plata County, CO NAD83		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	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 2-2 - Slot Tiffany 2-2					
Well Position	+N/-S	27.00 usft	Northing:	1,163,284.22 usft	Latitude:	37.0974694
	+E/-W	-32.82 usft	Easting:	2,408,617.09 usft	Longitude:	-107.5277536
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,669.66 usft

Wellbore	Lateral 1 ST1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	4/6/2016	9.28	63.65	50,251

Design	Plan #1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	3,684.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	274.06

Plan Sections										
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
3,684.00	91.15	314.38	3,235.09	771.64	-797.75	0.00	0.00	0.00	0.00	
4,703.53	90.73	263.39	3,217.15	1,090.77	-1,730.75	5.00	-0.04	-5.00	-90.00	
9,917.73	90.73	263.39	3,151.00	490.96	-6,909.92	0.00	0.00	0.00	0.00	Tiffany 2-2 Lat 1 ST1



Database:	Grand Junction District	Local Co-ordinate Reference:	Well Tiffany 2-2 - Slot Tiffany 2-2
Company:	B.P.	TVD Reference:	GL 6669.66' & RKB 11' @ 6680.66usft (Aztec 507)
Project:	La Plata County, CO NAD83	MD Reference:	GL 6669.66' & RKB 11' @ 6680.66usft (Aztec 507)
Site:	Tiffany Pad 2	North Reference:	Grid
Well:	Tiffany 2-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 1 ST1		
Design:	Plan #1		

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)
3,684.00	91.15	314.38	3,235.09	771.64	-797.75	850.44	0.00	0.00	0.00
3,700.00	91.15	313.58	3,234.77	782.75	-809.27	862.71	5.00	0.00	-5.00
3,800.00	91.15	308.57	3,232.75	848.42	-884.61	942.52	5.00	-0.01	-5.00
3,900.00	91.13	303.57	3,230.76	907.27	-965.39	1,027.27	5.00	-0.01	-5.00
4,000.00	91.11	298.57	3,228.80	958.86	-1,051.00	1,116.32	5.00	-0.02	-5.00
4,100.00	91.08	293.57	3,226.89	1,002.79	-1,140.78	1,208.98	5.00	-0.03	-5.00
4,200.00	91.04	288.57	3,225.04	1,038.72	-1,234.05	1,304.56	5.00	-0.04	-5.00
4,300.00	90.99	283.57	3,223.26	1,066.39	-1,330.09	1,402.33	5.00	-0.05	-5.00
4,400.00	90.94	278.57	3,221.58	1,085.59	-1,428.19	1,501.54	5.00	-0.06	-5.00
4,500.00	90.87	273.57	3,220.00	1,096.16	-1,527.58	1,601.43	5.00	-0.06	-5.00
4,600.00	90.80	268.57	3,218.53	1,098.02	-1,627.52	1,701.25	5.00	-0.07	-5.00
4,700.00	90.73	263.57	3,217.19	1,091.17	-1,727.25	1,800.24	5.00	-0.08	-5.00
4,703.53	90.73	263.39	3,217.15	1,090.77	-1,730.75	1,803.71	5.00	-0.08	-5.00
4,800.00	90.73	263.39	3,215.93	1,079.68	-1,826.58	1,898.50	0.00	0.00	0.00
4,900.00	90.73	263.39	3,214.66	1,068.17	-1,925.90	1,996.77	0.00	0.00	0.00
5,000.00	90.73	263.39	3,213.39	1,056.67	-2,025.23	2,095.03	0.00	0.00	0.00
5,100.00	90.73	263.39	3,212.12	1,045.17	-2,124.56	2,193.29	0.00	0.00	0.00
5,200.00	90.73	263.39	3,210.85	1,033.66	-2,223.89	2,291.55	0.00	0.00	0.00
5,300.00	90.73	263.39	3,209.58	1,022.16	-2,323.22	2,389.82	0.00	0.00	0.00
5,400.00	90.73	263.39	3,208.31	1,010.66	-2,422.54	2,488.08	0.00	0.00	0.00
5,500.00	90.73	263.39	3,207.05	999.15	-2,521.87	2,586.34	0.00	0.00	0.00
5,600.00	90.73	263.39	3,205.78	987.65	-2,621.20	2,684.61	0.00	0.00	0.00
5,700.00	90.73	263.39	3,204.51	976.15	-2,720.53	2,782.87	0.00	0.00	0.00
5,800.00	90.73	263.39	3,203.24	964.64	-2,819.86	2,881.13	0.00	0.00	0.00
5,900.00	90.73	263.39	3,201.97	953.14	-2,919.19	2,979.40	0.00	0.00	0.00
6,000.00	90.73	263.39	3,200.70	941.63	-3,018.51	3,077.66	0.00	0.00	0.00
6,100.00	90.73	263.39	3,199.43	930.13	-3,117.84	3,175.92	0.00	0.00	0.00
6,200.00	90.73	263.39	3,198.16	918.63	-3,217.17	3,274.18	0.00	0.00	0.00
6,300.00	90.73	263.39	3,196.90	907.12	-3,316.50	3,372.45	0.00	0.00	0.00
6,400.00	90.73	263.39	3,195.63	895.62	-3,415.83	3,470.71	0.00	0.00	0.00
6,500.00	90.73	263.39	3,194.36	884.12	-3,515.15	3,568.97	0.00	0.00	0.00
6,600.00	90.73	263.39	3,193.09	872.61	-3,614.48	3,667.24	0.00	0.00	0.00
6,700.00	90.73	263.39	3,191.82	861.11	-3,713.81	3,765.50	0.00	0.00	0.00
6,800.00	90.73	263.39	3,190.55	849.61	-3,813.14	3,863.76	0.00	0.00	0.00
6,900.00	90.73	263.39	3,189.28	838.10	-3,912.47	3,962.03	0.00	0.00	0.00
7,000.00	90.73	263.39	3,188.02	826.60	-4,011.79	4,060.29	0.00	0.00	0.00
7,100.00	90.73	263.39	3,186.75	815.10	-4,111.12	4,158.55	0.00	0.00	0.00
7,200.00	90.73	263.39	3,185.48	803.59	-4,210.45	4,256.81	0.00	0.00	0.00
7,300.00	90.73	263.39	3,184.21	792.09	-4,309.78	4,355.08	0.00	0.00	0.00
7,400.00	90.73	263.39	3,182.94	780.59	-4,409.11	4,453.34	0.00	0.00	0.00
7,500.00	90.73	263.39	3,181.67	769.08	-4,508.43	4,551.60	0.00	0.00	0.00
7,600.00	90.73	263.39	3,180.40	757.58	-4,607.76	4,649.87	0.00	0.00	0.00
7,700.00	90.73	263.39	3,179.14	746.08	-4,707.09	4,748.13	0.00	0.00	0.00
7,800.00	90.73	263.39	3,177.87	734.57	-4,806.42	4,846.39	0.00	0.00	0.00
7,900.00	90.73	263.39	3,176.60	723.07	-4,905.75	4,944.66	0.00	0.00	0.00
8,000.00	90.73	263.39	3,175.33	711.57	-5,005.07	5,042.92	0.00	0.00	0.00
8,100.00	90.73	263.39	3,174.06	700.06	-5,104.40	5,141.18	0.00	0.00	0.00
8,200.00	90.73	263.39	3,172.79	688.56	-5,203.73	5,239.44	0.00	0.00	0.00
8,300.00	90.73	263.39	3,171.52	677.06	-5,303.06	5,337.71	0.00	0.00	0.00
8,400.00	90.73	263.39	3,170.25	665.55	-5,402.39	5,435.97	0.00	0.00	0.00
8,500.00	90.73	263.39	3,168.99	654.05	-5,501.71	5,534.23	0.00	0.00	0.00
8,600.00	90.73	263.39	3,167.72	642.54	-5,601.04	5,632.50	0.00	0.00	0.00



Database:	Grand Junction District	Local Co-ordinate Reference:	Well Tiffany 2-2 - Slot Tiffany 2-2
Company:	B.P.	TVD Reference:	GL 6669.66' & RKB 11' @ 6680.66usft (Aztec 507)
Project:	La Plata County, CO NAD83	MD Reference:	GL 6669.66' & RKB 11' @ 6680.66usft (Aztec 507)
Site:	Tiffany Pad 2	North Reference:	Grid
Well:	Tiffany 2-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 1 ST1		
Design:	Plan #1		

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)
8,700.00	90.73	263.39	3,166.45	631.04	-5,700.37	5,730.76	0.00	0.00	0.00
8,800.00	90.73	263.39	3,165.18	619.54	-5,799.70	5,829.02	0.00	0.00	0.00
8,900.00	90.73	263.39	3,163.91	608.03	-5,899.03	5,927.29	0.00	0.00	0.00
9,000.00	90.73	263.39	3,162.64	596.53	-5,998.35	6,025.55	0.00	0.00	0.00
9,100.00	90.73	263.39	3,161.37	585.03	-6,097.68	6,123.81	0.00	0.00	0.00
9,200.00	90.73	263.39	3,160.11	573.52	-6,197.01	6,222.07	0.00	0.00	0.00
9,300.00	90.73	263.39	3,158.84	562.02	-6,296.34	6,320.34	0.00	0.00	0.00
9,400.00	90.73	263.39	3,157.57	550.52	-6,395.67	6,418.60	0.00	0.00	0.00
9,500.00	90.73	263.39	3,156.30	539.01	-6,494.99	6,516.86	0.00	0.00	0.00
9,600.00	90.73	263.39	3,155.03	527.51	-6,594.32	6,615.13	0.00	0.00	0.00
9,700.00	90.73	263.39	3,153.76	516.01	-6,693.65	6,713.39	0.00	0.00	0.00
9,800.00	90.73	263.39	3,152.49	504.50	-6,792.98	6,811.65	0.00	0.00	0.00
9,900.00	90.73	263.39	3,151.23	493.00	-6,892.31	6,909.92	0.00	0.00	0.00
9,917.73	90.73	263.39	3,151.00	490.96	-6,909.92	6,927.34	0.00	0.00	0.00
Tiffany 2-2 Lat 1 ST1 PBHL									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Tiffany 2-2 Lat 1 ST1 PB	0.00	0.00	3,151.00	490.96	-6,909.92	1,163,775.18	2,401,707.17	37.0984031	-107.5514760
- plan hits target center									
- Point									

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