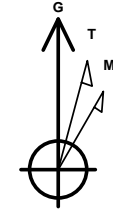




Company: B.P.
Project: La Plata County, CO NAD83
Site: Tiffany Pad 2
Well: Tiffany 2-1
Wellbore: Lateral 2
Design: Plan #1

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

WELL DETAILS: Tiffany 2-1

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

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	1163257.22	2408649.91	37.0973973	-107.5276390	Tiffany 2-1

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

Created By: Janie Collins Date: 11:27, April 07 2016

DESIGN TARGET DETAILS

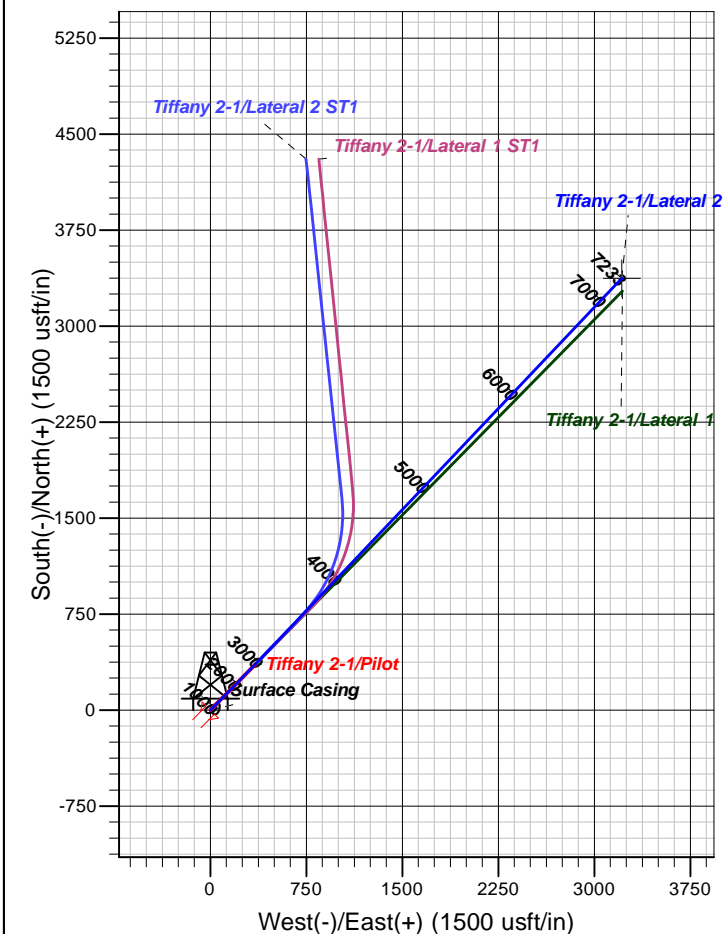
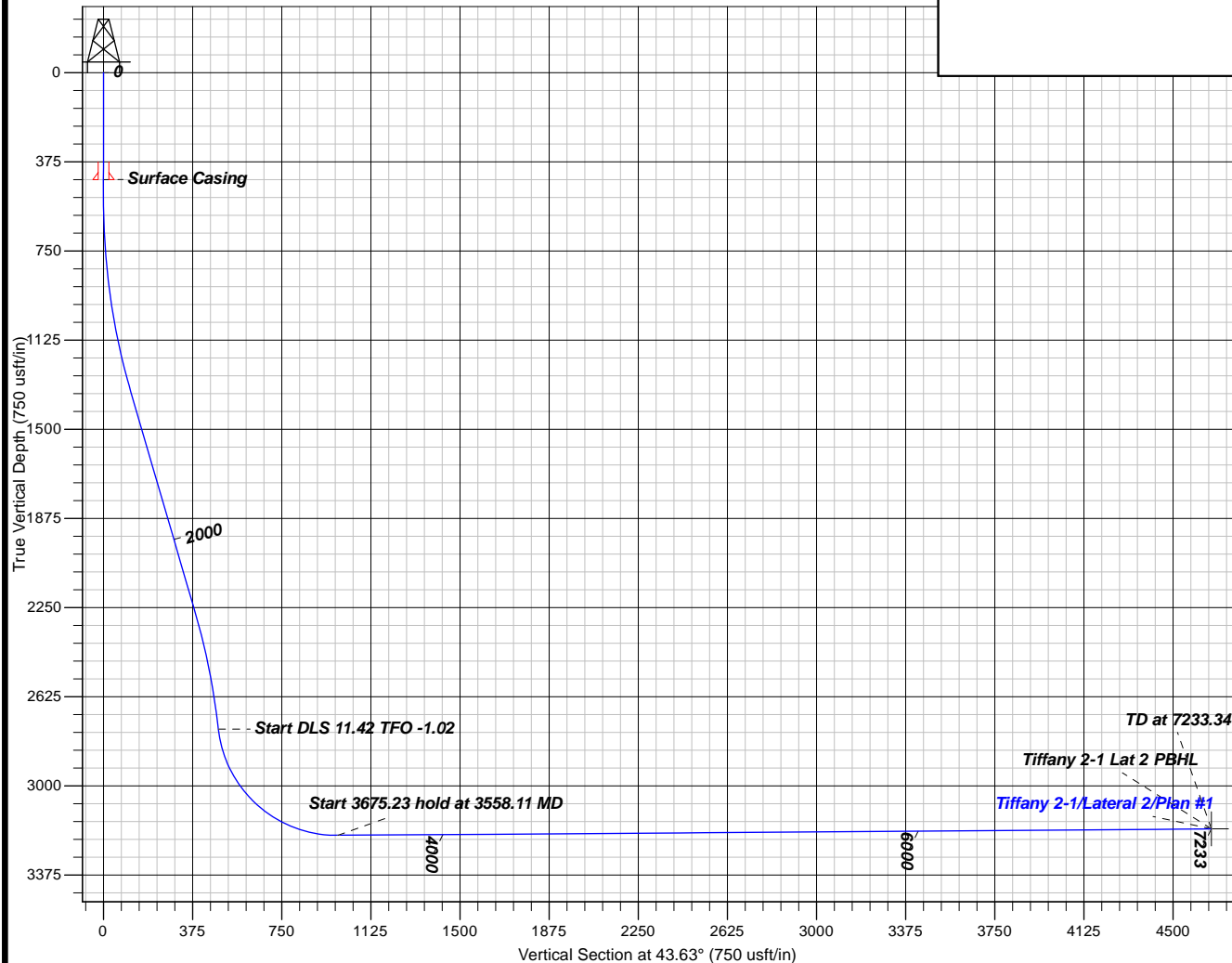
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Tiffany 2-1 Lat 2 PBHL	3181.00	3373.53	3215.52	1166630.75	2411865.43	37.1068513	-107.5168667

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
2821.00	6.25	44.53	2761.20	344.32	338.70	0.00	0.00	482.92	
3558.11	90.43	43.51	3208.30	708.13	685.27	11.42	-1.02	985.38	
7233.34	90.43	43.51	3181.00	3373.53	3215.52	0.00	0.00	4660.50	Tiffany 2-1 Lat 2 PBHL

FORMATION TOP DETAILS

No formation data is available





B.P.

La Plata County, CO NAD83

Tiffany Pad 2

Tiffany 2-1 - Slot Tiffany 2-1

Lateral 2

Plan: Plan #1

Standard Planning Report

07 April, 2016





Database:	Grand Junction District	Local Co-ordinate Reference:	Well Tiffany 2-1 - Slot Tiffany 2-1
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 2-1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 2		
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 2-1 - Slot Tiffany 2-1					
Well Position	+N/-S	0.00 usft	Northing:	1,163,257.22 usft	Latitude:	37.0973972
	+E/-W	0.00 usft	Easting:	2,408,649.91 usft	Longitude:	-107.5276391
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,669.66 usft

Wellbore	Lateral 2				
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:	2,821.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	43.63	

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
2,821.00	6.25	44.53	2,761.20	344.32	338.70	0.00	0.00	0.00	0.00	
3,558.11	90.43	43.51	3,208.30	708.13	685.27	11.42	11.42	-0.14	-1.02	
7,233.34	90.43	43.51	3,181.00	3,373.53	3,215.52	0.00	0.00	0.00	0.00	Tiffany 2-1 Lat 2 PBH



Database:	Grand Junction District	Local Co-ordinate Reference:	Well Tiffany 2-1 - Slot Tiffany 2-1
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 2-1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 2		
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)
2,821.00	6.25	44.53	2,761.20	344.32	338.70	482.92	0.00	0.00	0.00
2,900.00	15.27	43.92	2,838.73	354.90	348.95	497.65	11.42	11.42	-0.77
3,000.00	26.69	43.73	2,931.95	380.70	373.69	533.40	11.42	11.42	-0.19
3,100.00	38.11	43.65	3,016.24	419.38	410.64	586.89	11.42	11.42	-0.08
3,200.00	49.53	43.61	3,088.28	469.41	458.33	656.01	11.42	11.42	-0.05
3,300.00	60.95	43.57	3,145.20	528.82	514.88	738.03	11.42	11.42	-0.03
3,400.00	72.37	43.55	3,184.75	595.25	578.04	829.69	11.42	11.42	-0.03
3,500.00	83.79	43.52	3,205.37	666.06	645.33	927.38	11.42	11.42	-0.02
3,558.11	90.43	43.51	3,208.30	708.13	685.27	985.38	11.42	11.42	-0.02
3,600.00	90.43	43.51	3,207.99	738.51	714.10	1,027.27	0.00	0.00	0.00
3,700.00	90.43	43.51	3,207.25	811.03	782.95	1,127.27	0.00	0.00	0.00
3,800.00	90.43	43.51	3,206.51	883.55	851.80	1,227.26	0.00	0.00	0.00
3,900.00	90.43	43.51	3,205.76	956.08	920.64	1,327.26	0.00	0.00	0.00
4,000.00	90.43	43.51	3,205.02	1,028.60	989.49	1,427.26	0.00	0.00	0.00
4,100.00	90.43	43.51	3,204.28	1,101.12	1,058.34	1,527.25	0.00	0.00	0.00
4,200.00	90.43	43.51	3,203.53	1,173.65	1,127.18	1,627.25	0.00	0.00	0.00
4,300.00	90.43	43.51	3,202.79	1,246.17	1,196.03	1,727.25	0.00	0.00	0.00
4,400.00	90.43	43.51	3,202.05	1,318.69	1,264.87	1,827.24	0.00	0.00	0.00
4,500.00	90.43	43.51	3,201.31	1,391.22	1,333.72	1,927.24	0.00	0.00	0.00
4,600.00	90.43	43.51	3,200.56	1,463.74	1,402.57	2,027.24	0.00	0.00	0.00
4,700.00	90.43	43.51	3,199.82	1,536.26	1,471.41	2,127.24	0.00	0.00	0.00
4,800.00	90.43	43.51	3,199.08	1,608.79	1,540.26	2,227.23	0.00	0.00	0.00
4,900.00	90.43	43.51	3,198.33	1,681.31	1,609.10	2,327.23	0.00	0.00	0.00
5,000.00	90.43	43.51	3,197.59	1,753.83	1,677.95	2,427.23	0.00	0.00	0.00
5,100.00	90.43	43.51	3,196.85	1,826.36	1,746.80	2,527.22	0.00	0.00	0.00
5,200.00	90.43	43.51	3,196.11	1,898.88	1,815.64	2,627.22	0.00	0.00	0.00
5,300.00	90.43	43.51	3,195.36	1,971.40	1,884.49	2,727.22	0.00	0.00	0.00
5,400.00	90.43	43.51	3,194.62	2,043.93	1,953.34	2,827.22	0.00	0.00	0.00
5,500.00	90.43	43.51	3,193.88	2,116.45	2,022.18	2,927.21	0.00	0.00	0.00
5,600.00	90.43	43.51	3,193.13	2,188.97	2,091.03	3,027.21	0.00	0.00	0.00
5,700.00	90.43	43.51	3,192.39	2,261.50	2,159.87	3,127.21	0.00	0.00	0.00
5,800.00	90.43	43.51	3,191.65	2,334.02	2,228.72	3,227.20	0.00	0.00	0.00
5,900.00	90.43	43.51	3,190.91	2,406.55	2,297.57	3,327.20	0.00	0.00	0.00
6,000.00	90.43	43.51	3,190.16	2,479.07	2,366.41	3,427.20	0.00	0.00	0.00
6,100.00	90.43	43.51	3,189.42	2,551.59	2,435.26	3,527.19	0.00	0.00	0.00
6,200.00	90.43	43.51	3,188.68	2,624.12	2,504.10	3,627.19	0.00	0.00	0.00
6,300.00	90.43	43.51	3,187.93	2,696.64	2,572.95	3,727.19	0.00	0.00	0.00
6,400.00	90.43	43.51	3,187.19	2,769.16	2,641.80	3,827.19	0.00	0.00	0.00
6,500.00	90.43	43.51	3,186.45	2,841.69	2,710.64	3,927.18	0.00	0.00	0.00
6,600.00	90.43	43.51	3,185.71	2,914.21	2,779.49	4,027.18	0.00	0.00	0.00
6,700.00	90.43	43.51	3,184.96	2,986.73	2,848.34	4,127.18	0.00	0.00	0.00
6,800.00	90.43	43.51	3,184.22	3,059.26	2,917.18	4,227.17	0.00	0.00	0.00
6,900.00	90.43	43.51	3,183.48	3,131.78	2,986.03	4,327.17	0.00	0.00	0.00
7,000.00	90.43	43.51	3,182.73	3,204.30	3,054.87	4,427.17	0.00	0.00	0.00
7,100.00	90.43	43.51	3,181.99	3,276.83	3,123.72	4,527.16	0.00	0.00	0.00
7,200.00	90.43	43.51	3,181.25	3,349.35	3,192.57	4,627.16	0.00	0.00	0.00
7,233.34	90.43	43.51	3,181.00	3,373.53	3,215.52	4,660.50	0.00	0.00	0.00

Tiffany 2-1 Lat 2 PBHL



Database:	Grand Junction District	Local Co-ordinate Reference:	Well Tiffany 2-1 - Slot Tiffany 2-1
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 2-1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 2		
Design:	Plan #1		

Design Targets

Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- Shape									
Tiffany 2-1 Lat 2 PBHL	0.00	360.00	3,181.00	3,373.53	3,215.52	1,166,630.75	2,411,865.43	37.1068512	-107.5168668
- 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