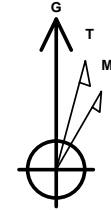




Company: B.P.
Project: La Plata County, CO NAD83
Site: Tiffany Pad 2
Well: Tiffany 2-2
Wellbore: Lateral 1
Design: Plan #1

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 2-2

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)

Created By: Janie Collins Date: 11:52, April 07 2016

DESIGN TARGET DETAILS

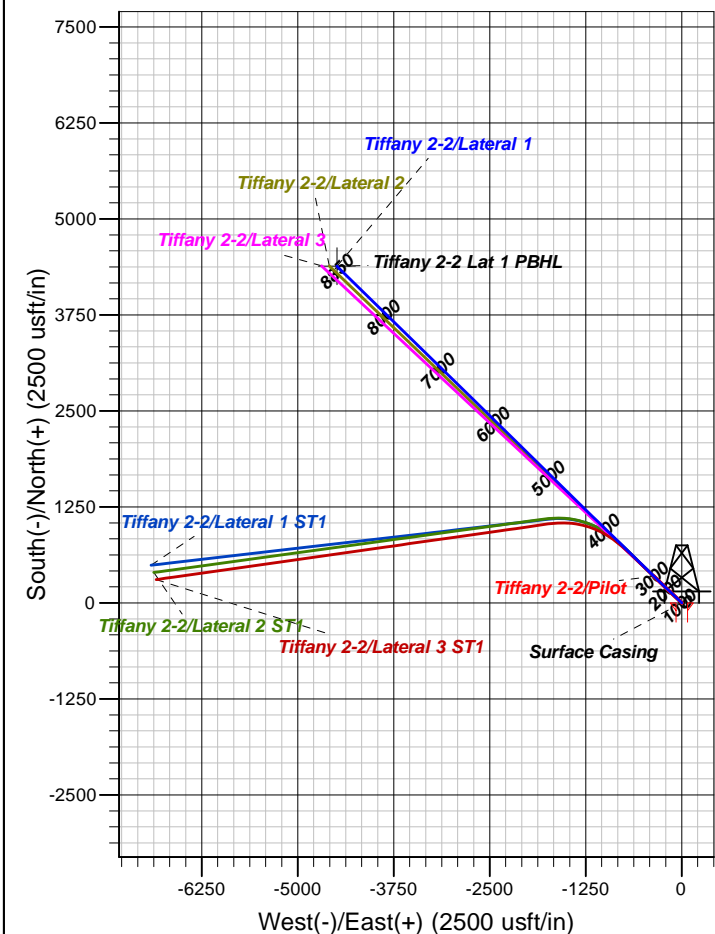
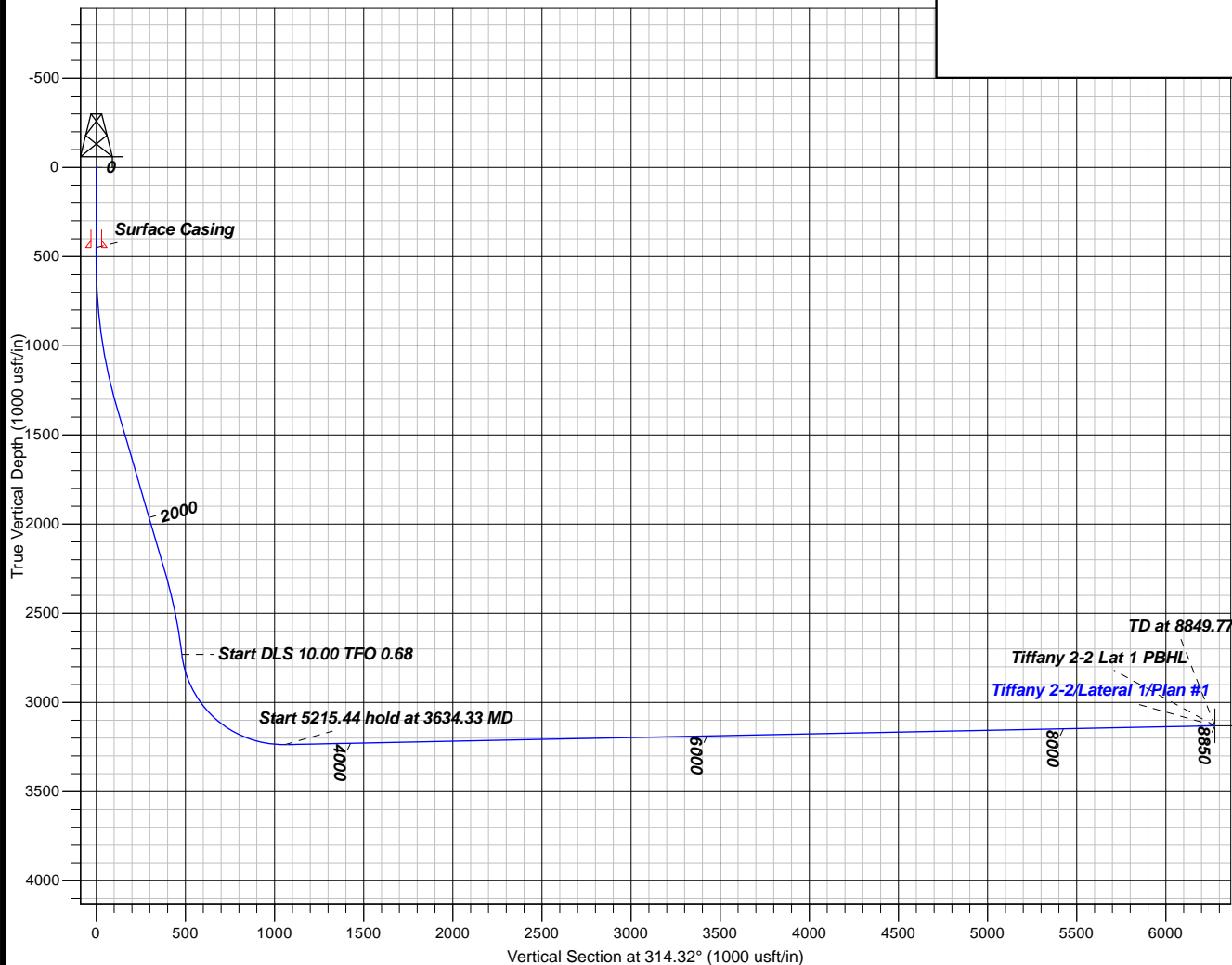
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Tiffany 2-2 Lat 1 PBHL	3131.00	4383.66	-4489.32	1167667.88	2404127.77	37.1092371	-107.5434706

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
2790.90	6.81	313.70	2731.20	331.48	-346.86	0.00	0.00	479.75	
3634.33	91.15	314.38	3236.09	736.91	-762.26	10.00	0.68	1060.21	
8849.77	91.15	314.38	3131.00	4383.66	-4489.32	0.00	0.00	6274.59	Tiffany 2-2 Lat 1 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

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		
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				
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:	2,790.90
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	314.32

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
2,790.90	6.81	313.70	2,731.20	331.48	-346.86	0.00	0.00	0.00	0.00	
3,634.33	91.15	314.38	3,236.09	736.91	-762.26	10.00	10.00	0.08	0.68	
8,849.77	91.15	314.38	3,131.00	4,383.66	-4,489.32	0.00	0.00	0.00	0.00	Tiffany 2-2 Lat 1 PBH



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		
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)
2,790.90	6.81	313.70	2,731.20	331.48	-346.86	479.75	0.00	0.00	0.00
2,800.00	7.72	313.78	2,740.23	332.27	-347.69	480.90	10.00	10.00	0.88
2,900.00	17.72	314.12	2,837.65	347.56	-363.51	502.90	10.00	10.00	0.34
3,000.00	27.72	314.22	2,929.77	374.44	-391.17	541.47	10.00	10.00	0.10
3,100.00	37.72	314.27	3,013.80	412.11	-429.84	595.46	10.00	10.00	0.05
3,200.00	47.72	314.30	3,087.17	459.43	-478.35	663.22	10.00	10.00	0.03
3,300.00	57.72	314.32	3,147.66	514.94	-535.21	742.69	10.00	10.00	0.02
3,400.00	67.72	314.34	3,193.43	576.97	-598.70	831.45	10.00	10.00	0.02
3,500.00	77.72	314.36	3,223.10	643.64	-666.90	926.82	10.00	10.00	0.02
3,600.00	87.72	314.37	3,235.75	712.91	-737.72	1,025.89	10.00	10.00	0.01
3,634.33	91.15	314.38	3,236.09	736.91	-762.26	1,060.21	10.00	10.00	0.01
3,700.00	91.15	314.38	3,234.77	782.83	-809.19	1,125.87	0.00	0.00	0.00
3,800.00	91.15	314.38	3,232.75	852.75	-880.65	1,225.85	0.00	0.00	0.00
3,900.00	91.15	314.38	3,230.74	922.67	-952.11	1,325.83	0.00	0.00	0.00
4,000.00	91.15	314.38	3,228.72	992.60	-1,023.57	1,425.81	0.00	0.00	0.00
4,100.00	91.15	314.38	3,226.71	1,062.52	-1,095.04	1,525.79	0.00	0.00	0.00
4,200.00	91.15	314.38	3,224.69	1,132.44	-1,166.50	1,625.77	0.00	0.00	0.00
4,300.00	91.15	314.38	3,222.68	1,202.36	-1,237.96	1,725.75	0.00	0.00	0.00
4,400.00	91.15	314.38	3,220.66	1,272.28	-1,309.42	1,825.73	0.00	0.00	0.00
4,500.00	91.15	314.38	3,218.65	1,342.21	-1,380.88	1,925.70	0.00	0.00	0.00
4,600.00	91.15	314.38	3,216.63	1,412.13	-1,452.35	2,025.68	0.00	0.00	0.00
4,700.00	91.15	314.38	3,214.62	1,482.05	-1,523.81	2,125.66	0.00	0.00	0.00
4,800.00	91.15	314.38	3,212.60	1,551.97	-1,595.27	2,225.64	0.00	0.00	0.00
4,900.00	91.15	314.38	3,210.59	1,621.89	-1,666.73	2,325.62	0.00	0.00	0.00
5,000.00	91.15	314.38	3,208.57	1,691.82	-1,738.19	2,425.60	0.00	0.00	0.00
5,100.00	91.15	314.38	3,206.56	1,761.74	-1,809.66	2,525.58	0.00	0.00	0.00
5,200.00	91.15	314.38	3,204.54	1,831.66	-1,881.12	2,625.56	0.00	0.00	0.00
5,300.00	91.15	314.38	3,202.53	1,901.58	-1,952.58	2,725.54	0.00	0.00	0.00
5,400.00	91.15	314.38	3,200.51	1,971.51	-2,024.04	2,825.52	0.00	0.00	0.00
5,500.00	91.15	314.38	3,198.50	2,041.43	-2,095.50	2,925.50	0.00	0.00	0.00
5,600.00	91.15	314.38	3,196.48	2,111.35	-2,166.97	3,025.48	0.00	0.00	0.00
5,700.00	91.15	314.38	3,194.47	2,181.27	-2,238.43	3,125.46	0.00	0.00	0.00
5,800.00	91.15	314.38	3,192.45	2,251.19	-2,309.89	3,225.44	0.00	0.00	0.00
5,900.00	91.15	314.38	3,190.44	2,321.12	-2,381.35	3,325.42	0.00	0.00	0.00
6,000.00	91.15	314.38	3,188.42	2,391.04	-2,452.82	3,425.40	0.00	0.00	0.00
6,100.00	91.15	314.38	3,186.41	2,460.96	-2,524.28	3,525.38	0.00	0.00	0.00
6,200.00	91.15	314.38	3,184.39	2,530.88	-2,595.74	3,625.36	0.00	0.00	0.00
6,300.00	91.15	314.38	3,182.38	2,600.81	-2,667.20	3,725.34	0.00	0.00	0.00
6,400.00	91.15	314.38	3,180.36	2,670.73	-2,738.66	3,825.32	0.00	0.00	0.00
6,500.00	91.15	314.38	3,178.35	2,740.65	-2,810.13	3,925.30	0.00	0.00	0.00
6,600.00	91.15	314.38	3,176.33	2,810.57	-2,881.59	4,025.28	0.00	0.00	0.00
6,700.00	91.15	314.38	3,174.32	2,880.49	-2,953.05	4,125.26	0.00	0.00	0.00
6,800.00	91.15	314.38	3,172.30	2,950.42	-3,024.51	4,225.24	0.00	0.00	0.00
6,900.00	91.15	314.38	3,170.29	3,020.34	-3,095.97	4,325.22	0.00	0.00	0.00
7,000.00	91.15	314.38	3,168.27	3,090.26	-3,167.44	4,425.20	0.00	0.00	0.00
7,100.00	91.15	314.38	3,166.26	3,160.18	-3,238.90	4,525.18	0.00	0.00	0.00
7,200.00	91.15	314.38	3,164.24	3,230.11	-3,310.36	4,625.16	0.00	0.00	0.00
7,300.00	91.15	314.38	3,162.23	3,300.03	-3,381.82	4,725.13	0.00	0.00	0.00
7,400.00	91.15	314.38	3,160.21	3,369.95	-3,453.28	4,825.11	0.00	0.00	0.00
7,500.00	91.15	314.38	3,158.20	3,439.87	-3,524.75	4,925.09	0.00	0.00	0.00
7,600.00	91.15	314.38	3,156.18	3,509.79	-3,596.21	5,025.07	0.00	0.00	0.00
7,700.00	91.15	314.38	3,154.17	3,579.72	-3,667.67	5,125.05	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		
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)
7,800.00	91.15	314.38	3,152.15	3,649.64	-3,739.13	5,225.03	0.00	0.00	0.00
7,900.00	91.15	314.38	3,150.14	3,719.56	-3,810.59	5,325.01	0.00	0.00	0.00
8,000.00	91.15	314.38	3,148.12	3,789.48	-3,882.06	5,424.99	0.00	0.00	0.00
8,100.00	91.15	314.38	3,146.11	3,859.40	-3,953.52	5,524.97	0.00	0.00	0.00
8,200.00	91.15	314.38	3,144.09	3,929.33	-4,024.98	5,624.95	0.00	0.00	0.00
8,300.00	91.15	314.38	3,142.08	3,999.25	-4,096.44	5,724.93	0.00	0.00	0.00
8,400.00	91.15	314.38	3,140.06	4,069.17	-4,167.91	5,824.91	0.00	0.00	0.00
8,500.00	91.15	314.38	3,138.05	4,139.09	-4,239.37	5,924.89	0.00	0.00	0.00
8,600.00	91.15	314.38	3,136.03	4,209.02	-4,310.83	6,024.87	0.00	0.00	0.00
8,700.00	91.15	314.38	3,134.02	4,278.94	-4,382.29	6,124.85	0.00	0.00	0.00
8,800.00	91.15	314.38	3,132.00	4,348.86	-4,453.75	6,224.83	0.00	0.00	0.00
8,849.77	91.15	314.38	3,131.00	4,383.66	-4,489.32	6,274.59	0.00	0.00	0.00
Tiffany 2-2 Lat 1 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 2-2 Lat 1 PBHL - plan hits target center - Point	0.00	0.00	3,131.00	4,383.66	-4,489.32	1,167,667.88	2,404,127.77	37.1092371	-107.5434706

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