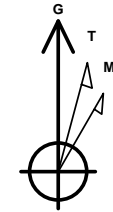




Company: B.P.
Project: La Plata County, CO NAD83
Site: Tiffany Pad 2
Well: Tiffany 2-4
Wellbore: Lateral 2
Design: Plan #1

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: 50251.2snT
Dip Angle: 63.65°
Date: 4/6/2016
Model: HDGM

WELL DETAILS: Tiffany 2-4

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

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	1163203.21	2408715.54	37.0972529	-107.5274101	Tiffany 2-4

Plan: Plan #1 (Tiffany 2-4/Lateral 2)

Created By: Janie Collins Date: 14:41, April 07 2016

DESIGN TARGET DETAILS

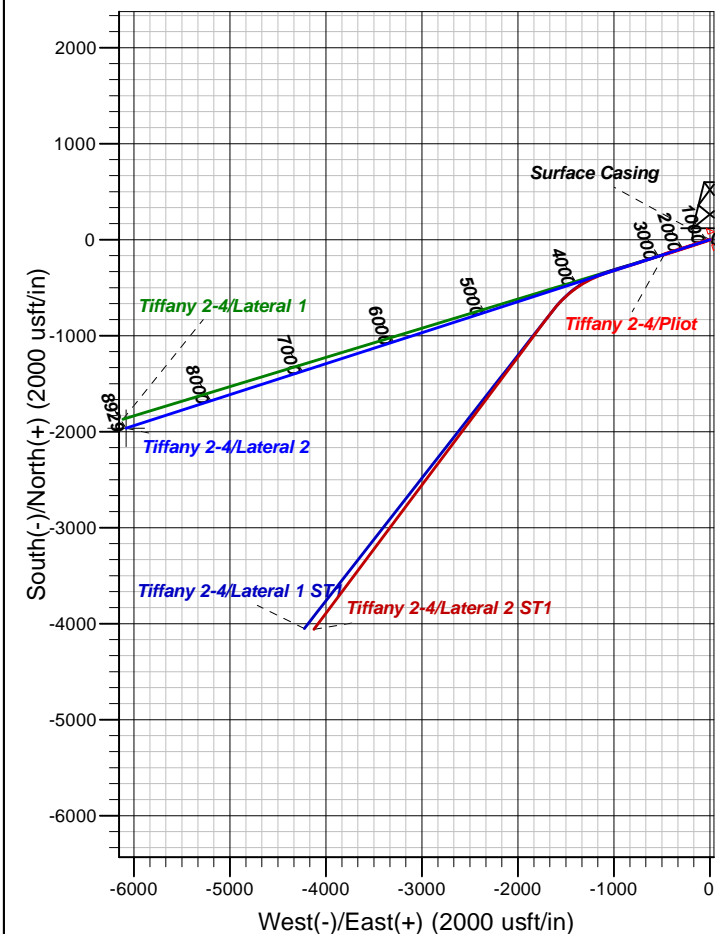
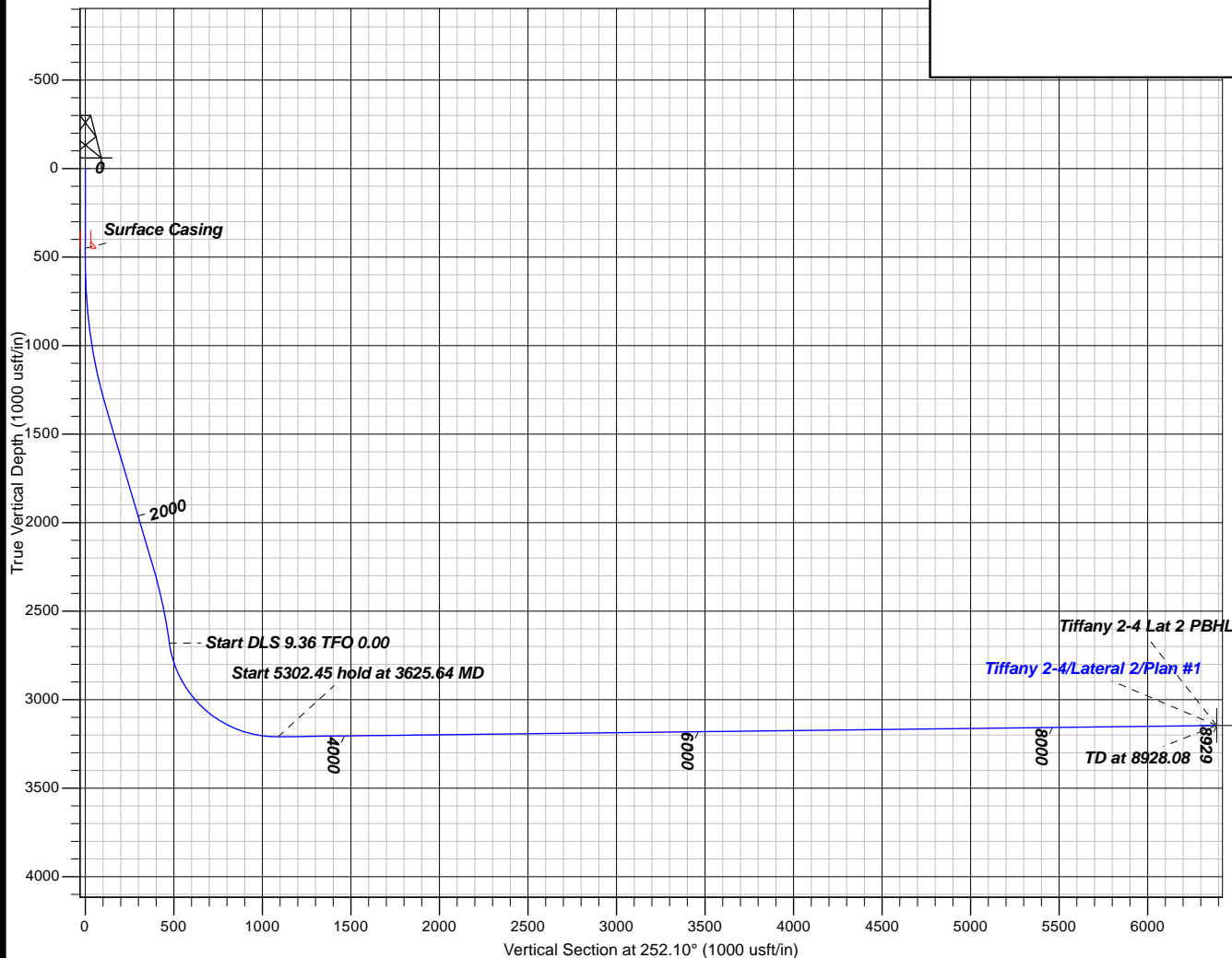
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Tiffany 2-4 Lat 2 PBHL	3146.00	-1964.12	-6080.86	1161239.09	2402634.68	37.0914956	-107.5481060

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
2739.00	7.70	252.10	2679.34	-145.75	-451.23	0.00	0.00	474.19	
3625.64	90.69	252.10	3209.45	-334.45	-1035.46	9.36	0.00	1088.13	
8928.08	90.69	252.10	3146.00	-1964.12	-6080.86	0.00	0.00	6390.20	Tiffany 2-4 Lat 2 PBHL

FORMATION TOP DETAILS

No formation data is available





B.P.

La Plata County, CO NAD83

Tiffany Pad 2

Tiffany 2-4 - Slot Tiffany 2-4

Lateral 2

Plan: Plan #1

Standard Planning Report

07 April, 2016





Database:	Grand Junction District	Local Co-ordinate Reference:	Well Tiffany 2-4 - Slot Tiffany 2-4
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 2-4	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 2-4 - Slot Tiffany 2-4			
Well Position	+N/-S	-54.01 usft	Northing:	1,163,203.21 usft
	+E/-W	65.63 usft	Easting:	2,408,715.54 usft
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:	2,739.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	252.10

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
2,739.00	7.70	252.10	2,679.34	-145.75	-451.23	0.00	0.00	0.00	0.00	
3,625.64	90.69	252.10	3,209.45	-334.45	-1,035.46	9.36	9.36	0.00	0.00	
8,928.08	90.69	252.10	3,146.00	-1,964.12	-6,080.86	0.00	0.00	0.00	0.00	Tiffany 2-4 Lat 2 PBH



Database:	Grand Junction District	Local Co-ordinate Reference:	Well Tiffany 2-4 - Slot Tiffany 2-4
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 2-4	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)
2,739.00	7.70	252.10	2,679.34	-145.75	-451.23	474.19	0.00	0.00	0.00
2,800.00	13.41	252.10	2,739.28	-149.18	-461.86	485.35	9.36	9.36	0.00
2,900.00	22.77	252.10	2,834.23	-158.71	-491.37	516.36	9.36	9.36	0.00
3,000.00	32.13	252.10	2,922.88	-172.86	-535.18	562.40	9.36	9.36	0.00
3,100.00	41.49	252.10	3,002.86	-191.26	-592.12	622.25	9.36	9.36	0.00
3,200.00	50.85	252.10	3,072.04	-213.40	-660.69	694.30	9.36	9.36	0.00
3,300.00	60.21	252.10	3,128.58	-238.71	-739.05	776.65	9.36	9.36	0.00
3,400.00	69.57	252.10	3,170.97	-266.51	-825.12	867.09	9.36	9.36	0.00
3,500.00	78.93	252.10	3,198.09	-296.06	-916.60	963.23	9.36	9.36	0.00
3,600.00	88.29	252.10	3,209.22	-326.57	-1,011.06	1,062.50	9.36	9.36	0.00
3,625.64	90.69	252.10	3,209.45	-334.45	-1,035.46	1,088.13	9.36	9.36	0.00
3,700.00	90.69	252.10	3,208.56	-357.31	-1,106.22	1,162.49	0.00	0.00	0.00
3,800.00	90.69	252.10	3,207.36	-388.04	-1,201.37	1,262.48	0.00	0.00	0.00
3,900.00	90.69	252.10	3,206.16	-418.78	-1,296.52	1,362.47	0.00	0.00	0.00
4,000.00	90.69	252.10	3,204.97	-449.51	-1,391.67	1,462.47	0.00	0.00	0.00
4,100.00	90.69	252.10	3,203.77	-480.24	-1,486.82	1,562.46	0.00	0.00	0.00
4,200.00	90.69	252.10	3,202.57	-510.98	-1,581.98	1,662.45	0.00	0.00	0.00
4,300.00	90.69	252.10	3,201.38	-541.71	-1,677.13	1,762.45	0.00	0.00	0.00
4,400.00	90.69	252.10	3,200.18	-572.45	-1,772.28	1,862.44	0.00	0.00	0.00
4,500.00	90.69	252.10	3,198.98	-603.18	-1,867.43	1,962.43	0.00	0.00	0.00
4,600.00	90.69	252.10	3,197.79	-633.92	-1,962.59	2,062.42	0.00	0.00	0.00
4,700.00	90.69	252.10	3,196.59	-664.65	-2,057.74	2,162.42	0.00	0.00	0.00
4,800.00	90.69	252.10	3,195.39	-695.38	-2,152.89	2,262.41	0.00	0.00	0.00
4,900.00	90.69	252.10	3,194.20	-726.12	-2,248.04	2,362.40	0.00	0.00	0.00
5,000.00	90.69	252.10	3,193.00	-756.85	-2,343.20	2,462.40	0.00	0.00	0.00
5,100.00	90.69	252.10	3,191.80	-787.59	-2,438.35	2,562.39	0.00	0.00	0.00
5,200.00	90.69	252.10	3,190.61	-818.32	-2,533.50	2,662.38	0.00	0.00	0.00
5,300.00	90.69	252.10	3,189.41	-849.06	-2,628.65	2,762.37	0.00	0.00	0.00
5,400.00	90.69	252.10	3,188.22	-879.79	-2,723.81	2,862.37	0.00	0.00	0.00
5,500.00	90.69	252.10	3,187.02	-910.52	-2,818.96	2,962.36	0.00	0.00	0.00
5,600.00	90.69	252.10	3,185.82	-941.26	-2,914.11	3,062.35	0.00	0.00	0.00
5,700.00	90.69	252.10	3,184.63	-971.99	-3,009.26	3,162.35	0.00	0.00	0.00
5,800.00	90.69	252.10	3,183.43	-1,002.73	-3,104.42	3,262.34	0.00	0.00	0.00
5,900.00	90.69	252.10	3,182.23	-1,033.46	-3,199.57	3,362.33	0.00	0.00	0.00
6,000.00	90.69	252.10	3,181.04	-1,064.20	-3,294.72	3,462.32	0.00	0.00	0.00
6,100.00	90.69	252.10	3,179.84	-1,094.93	-3,389.87	3,562.32	0.00	0.00	0.00
6,200.00	90.69	252.10	3,178.64	-1,125.66	-3,485.02	3,662.31	0.00	0.00	0.00
6,300.00	90.69	252.10	3,177.45	-1,156.40	-3,580.18	3,762.30	0.00	0.00	0.00
6,400.00	90.69	252.10	3,176.25	-1,187.13	-3,675.33	3,862.30	0.00	0.00	0.00
6,500.00	90.69	252.10	3,175.05	-1,217.87	-3,770.48	3,962.29	0.00	0.00	0.00
6,600.00	90.69	252.10	3,173.86	-1,248.60	-3,865.63	4,062.28	0.00	0.00	0.00
6,700.00	90.69	252.10	3,172.66	-1,279.34	-3,960.79	4,162.27	0.00	0.00	0.00
6,800.00	90.69	252.10	3,171.46	-1,310.07	-4,055.94	4,262.27	0.00	0.00	0.00
6,900.00	90.69	252.10	3,170.27	-1,340.80	-4,151.09	4,362.26	0.00	0.00	0.00
7,000.00	90.69	252.10	3,169.07	-1,371.54	-4,246.24	4,462.25	0.00	0.00	0.00
7,100.00	90.69	252.10	3,167.87	-1,402.27	-4,341.40	4,562.25	0.00	0.00	0.00
7,200.00	90.69	252.10	3,166.68	-1,433.01	-4,436.55	4,662.24	0.00	0.00	0.00
7,300.00	90.69	252.10	3,165.48	-1,463.74	-4,531.70	4,762.23	0.00	0.00	0.00
7,400.00	90.69	252.10	3,164.28	-1,494.48	-4,626.85	4,862.22	0.00	0.00	0.00
7,500.00	90.69	252.10	3,163.09	-1,525.21	-4,722.01	4,962.22	0.00	0.00	0.00
7,600.00	90.69	252.10	3,161.89	-1,555.94	-4,817.16	5,062.21	0.00	0.00	0.00
7,700.00	90.69	252.10	3,160.69	-1,586.68	-4,912.31	5,162.20	0.00	0.00	0.00



Database:	Grand Junction District	Local Co-ordinate Reference:	Well Tiffany 2-4 - Slot Tiffany 2-4
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 2-4	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)
7,800.00	90.69	252.10	3,159.50	-1,617.41	-5,007.46	5,262.20	0.00	0.00	0.00
7,900.00	90.69	252.10	3,158.30	-1,648.15	-5,102.62	5,362.19	0.00	0.00	0.00
8,000.00	90.69	252.10	3,157.11	-1,678.88	-5,197.77	5,462.18	0.00	0.00	0.00
8,100.00	90.69	252.10	3,155.91	-1,709.61	-5,292.92	5,562.17	0.00	0.00	0.00
8,200.00	90.69	252.10	3,154.71	-1,740.35	-5,388.07	5,662.17	0.00	0.00	0.00
8,300.00	90.69	252.10	3,153.52	-1,771.08	-5,483.22	5,762.16	0.00	0.00	0.00
8,400.00	90.69	252.10	3,152.32	-1,801.82	-5,578.38	5,862.15	0.00	0.00	0.00
8,500.00	90.69	252.10	3,151.12	-1,832.55	-5,673.53	5,962.15	0.00	0.00	0.00
8,600.00	90.69	252.10	3,149.93	-1,863.29	-5,768.68	6,062.14	0.00	0.00	0.00
8,700.00	90.69	252.10	3,148.73	-1,894.02	-5,863.83	6,162.13	0.00	0.00	0.00
8,800.00	90.69	252.10	3,147.53	-1,924.75	-5,958.99	6,262.12	0.00	0.00	0.00
8,900.00	90.69	252.10	3,146.34	-1,955.49	-6,054.14	6,362.12	0.00	0.00	0.00
8,928.08	90.69	252.10	3,146.00	-1,964.12	-6,080.86	6,390.20	0.00	0.00	0.00
Tiffany 2-4 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
Tiffany 2-4 Lat 2 PBHL - plan hits target center - Point	0.00	360.00	3,146.00	-1,964.12	-6,080.86	1,161,239.09	2,402,634.68	37.0914956	-107.5481060

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