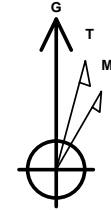




Company: B.P.
Project: La Plata County, CO NAD83
Site: Tiffany Pad 2
Well: Tiffany 2-5
Wellbore: Lateral 2
Design: Plan #1

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 2-5

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

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	
0.00	0.00	1163176.21	2408748.36	37.0971807	-107.5272956	Tiffany 2-5

Plan: Plan #1 (Tiffany 2-5/Lateral 2)

Created By: Janie Collins Date: 15:12, April 07 2016

DESIGN TARGET DETAILS

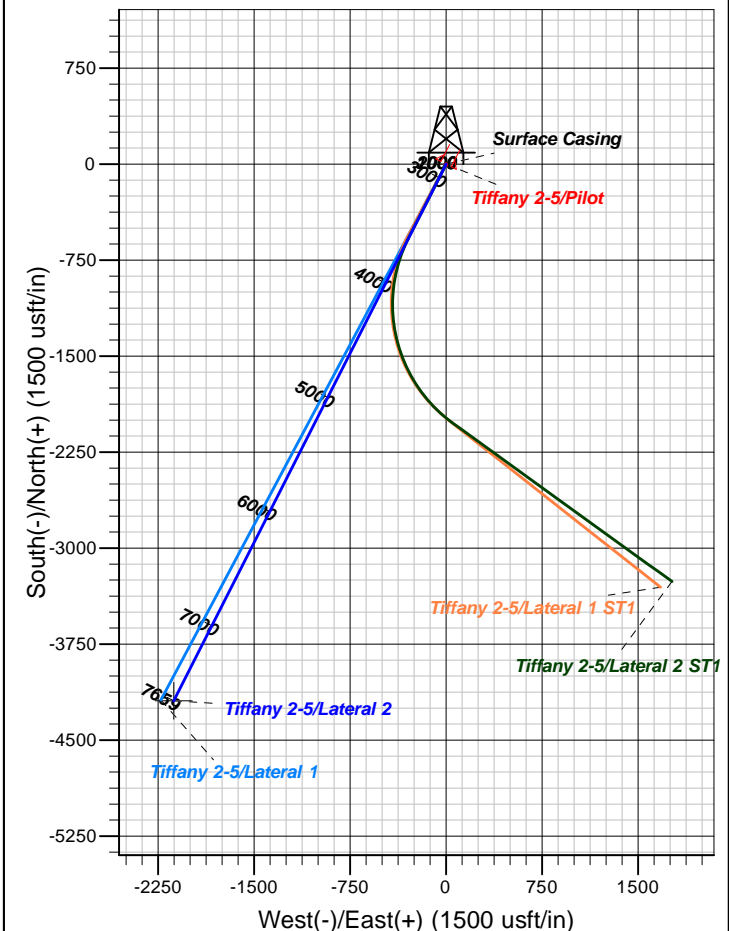
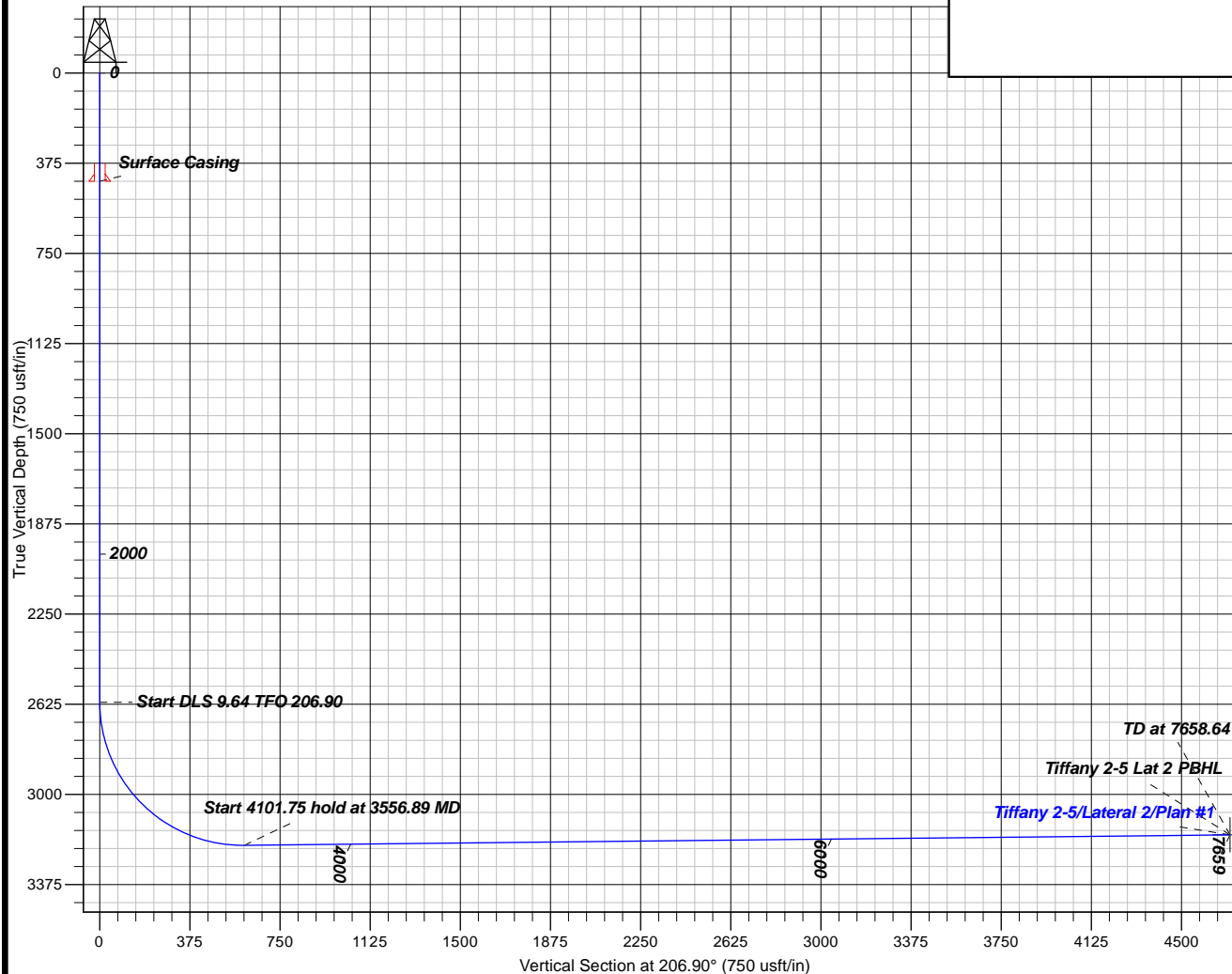
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Tiffany 2-5 Lat 2 PBHL	3168.00	-4193.23	-2127.70	1158982.98	2406620.66	37.0855402	-107.5342757

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
2617.00	0.00	0.00	2617.00	0.00	0.00	0.00	0.00	0.00	
3556.89	90.61	206.90	3211.32	-535.62	-271.78	9.64	206.90	600.63	
7658.64	90.61	206.90	3168.00	-4193.23	-2127.70	0.00	0.00	4702.16	Tiffany 2-5 Lat 2 PBHL

FORMATION TOP DETAILS

No formation data is available





B.P.

La Plata County, CO NAD83

Tiffany Pad 2

Tiffany 2-5 - Slot Tiffany 2-5

Lateral 2

Plan: Plan #1

Standard Planning Report

07 April, 2016





Database:	Grand Junction District	Local Co-ordinate Reference:	Well Tiffany 2-5 - Slot Tiffany 2-5
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 2-5	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 2-5 - Slot Tiffany 2-5					
Well Position	+N/-S	-81.01 usft	Northing:	1,163,176.21 usft	Latitude:	37.0971807
	+E/-W	98.45 usft	Easting:	2,408,748.36 usft	Longitude:	-107.5272956
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:	2,617.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	206.90

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
2,617.00	0.00	0.00	2,617.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,556.89	90.61	206.90	3,211.32	-535.62	-271.78	9.64	9.64	-16.29	206.90	
7,658.64	90.61	206.90	3,168.00	-4,193.23	-2,127.70	0.00	0.00	0.00	0.00	Tiffany 2-5 Lat 2 PBH



Database:	Grand Junction District	Local Co-ordinate Reference:	Well Tiffany 2-5 - Slot Tiffany 2-5
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 2-5	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)
2,617.00	0.00	0.00	2,617.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	8.00	206.90	2,699.73	-5.16	-2.62	5.79	9.64	9.64	0.00
2,800.00	17.64	206.90	2,797.12	-24.93	-12.65	27.95	9.64	9.64	0.00
2,900.00	27.28	206.90	2,889.43	-58.96	-29.92	66.11	9.64	9.64	0.00
3,000.00	36.92	206.90	2,974.04	-106.29	-53.93	119.19	9.64	9.64	0.00
3,100.00	46.56	206.90	3,048.57	-165.59	-84.02	185.69	9.64	9.64	0.00
3,200.00	56.20	206.90	3,110.91	-235.18	-119.34	263.73	9.64	9.64	0.00
3,300.00	65.84	206.90	3,159.30	-313.10	-158.87	351.10	9.64	9.64	0.00
3,400.00	75.48	206.90	3,192.37	-397.15	-201.52	445.35	9.64	9.64	0.00
3,500.00	85.12	206.90	3,209.20	-484.95	-246.07	543.81	9.64	9.64	0.00
3,556.89	90.61	206.90	3,211.32	-535.62	-271.78	600.63	9.64	9.64	0.00
3,600.00	90.61	206.90	3,210.87	-574.07	-291.29	643.74	0.00	0.00	0.00
3,700.00	90.61	206.90	3,209.81	-663.24	-336.54	743.74	0.00	0.00	0.00
3,800.00	90.61	206.90	3,208.75	-752.41	-381.78	843.73	0.00	0.00	0.00
3,900.00	90.61	206.90	3,207.70	-841.58	-427.03	943.73	0.00	0.00	0.00
4,000.00	90.61	206.90	3,206.64	-930.76	-472.28	1,043.72	0.00	0.00	0.00
4,100.00	90.61	206.90	3,205.59	-1,019.93	-517.52	1,143.71	0.00	0.00	0.00
4,200.00	90.61	206.90	3,204.53	-1,109.10	-562.77	1,243.71	0.00	0.00	0.00
4,300.00	90.61	206.90	3,203.47	-1,198.27	-608.02	1,343.70	0.00	0.00	0.00
4,400.00	90.61	206.90	3,202.42	-1,287.44	-653.27	1,443.70	0.00	0.00	0.00
4,500.00	90.61	206.90	3,201.36	-1,376.61	-698.51	1,543.69	0.00	0.00	0.00
4,600.00	90.61	206.90	3,200.30	-1,465.79	-743.76	1,643.69	0.00	0.00	0.00
4,700.00	90.61	206.90	3,199.25	-1,554.96	-789.01	1,743.68	0.00	0.00	0.00
4,800.00	90.61	206.90	3,198.19	-1,644.13	-834.25	1,843.68	0.00	0.00	0.00
4,900.00	90.61	206.90	3,197.14	-1,733.30	-879.50	1,943.67	0.00	0.00	0.00
5,000.00	90.61	206.90	3,196.08	-1,822.47	-924.75	2,043.66	0.00	0.00	0.00
5,100.00	90.61	206.90	3,195.02	-1,911.64	-969.99	2,143.66	0.00	0.00	0.00
5,200.00	90.61	206.90	3,193.97	-2,000.82	-1,015.24	2,243.65	0.00	0.00	0.00
5,300.00	90.61	206.90	3,192.91	-2,089.99	-1,060.49	2,343.65	0.00	0.00	0.00
5,400.00	90.61	206.90	3,191.86	-2,179.16	-1,105.73	2,443.64	0.00	0.00	0.00
5,500.00	90.61	206.90	3,190.80	-2,268.33	-1,150.98	2,543.64	0.00	0.00	0.00
5,600.00	90.61	206.90	3,189.74	-2,357.50	-1,196.23	2,643.63	0.00	0.00	0.00
5,700.00	90.61	206.90	3,188.69	-2,446.67	-1,241.47	2,743.62	0.00	0.00	0.00
5,800.00	90.61	206.90	3,187.63	-2,535.85	-1,286.72	2,843.62	0.00	0.00	0.00
5,900.00	90.61	206.90	3,186.57	-2,625.02	-1,331.97	2,943.61	0.00	0.00	0.00
6,000.00	90.61	206.90	3,185.52	-2,714.19	-1,377.22	3,043.61	0.00	0.00	0.00
6,100.00	90.61	206.90	3,184.46	-2,803.36	-1,422.46	3,143.60	0.00	0.00	0.00
6,200.00	90.61	206.90	3,183.41	-2,892.53	-1,467.71	3,243.60	0.00	0.00	0.00
6,300.00	90.61	206.90	3,182.35	-2,981.71	-1,512.96	3,343.59	0.00	0.00	0.00
6,400.00	90.61	206.90	3,181.29	-3,070.88	-1,558.20	3,443.59	0.00	0.00	0.00
6,500.00	90.61	206.90	3,180.24	-3,160.05	-1,603.45	3,543.58	0.00	0.00	0.00
6,600.00	90.61	206.90	3,179.18	-3,249.22	-1,648.70	3,643.57	0.00	0.00	0.00
6,700.00	90.61	206.90	3,178.12	-3,338.39	-1,693.94	3,743.57	0.00	0.00	0.00
6,800.00	90.61	206.90	3,177.07	-3,427.56	-1,739.19	3,843.56	0.00	0.00	0.00
6,900.00	90.61	206.90	3,176.01	-3,516.74	-1,784.44	3,943.56	0.00	0.00	0.00
7,000.00	90.61	206.90	3,174.96	-3,605.91	-1,829.68	4,043.55	0.00	0.00	0.00
7,100.00	90.61	206.90	3,173.90	-3,695.08	-1,874.93	4,143.55	0.00	0.00	0.00
7,200.00	90.61	206.90	3,172.84	-3,784.25	-1,920.18	4,243.54	0.00	0.00	0.00
7,300.00	90.61	206.90	3,171.79	-3,873.42	-1,965.43	4,343.54	0.00	0.00	0.00
7,400.00	90.61	206.90	3,170.73	-3,962.59	-2,010.67	4,443.53	0.00	0.00	0.00
7,500.00	90.61	206.90	3,169.68	-4,051.77	-2,055.92	4,543.52	0.00	0.00	0.00
7,600.00	90.61	206.90	3,168.62	-4,140.94	-2,101.17	4,643.52	0.00	0.00	0.00



Database:	Grand Junction District	Local Co-ordinate Reference:	Well Tiffany 2-5 - Slot Tiffany 2-5
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 2-5	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)
7,658.64	90.61	206.90	3,168.00	-4,193.23	-2,127.70	4,702.16	0.00	0.00	0.00
Tiffany 2-5 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 2-5 Lat 2 PBHL - plan hits target center - Point	0.00	360.00	3,168.00	-4,193.23	-2,127.70	1,158,982.98	2,406,620.66	37.0855401	-107.5342757

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	