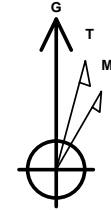




Company: B.P.
Project: La Plata County, CO NAD83
Site: Tiffany Pad 2
Well: Tiffany 2-5
Wellbore: Lateral 1
Design: Plan #1

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: 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 1)

Created By: Janie Collins Date: 14:57, April 07 2016

DESIGN TARGET DETAILS

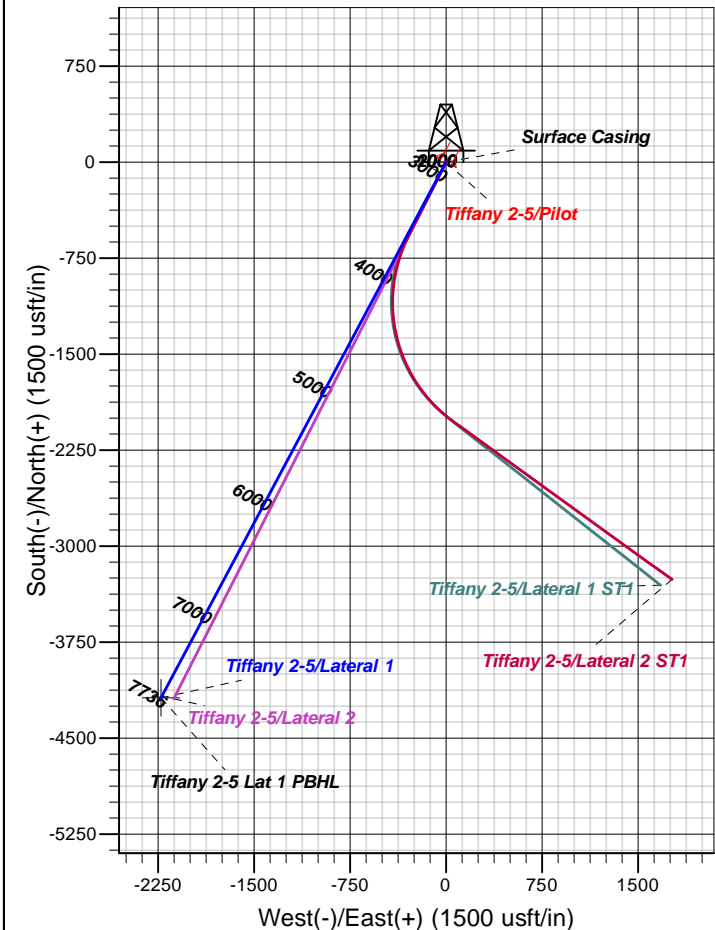
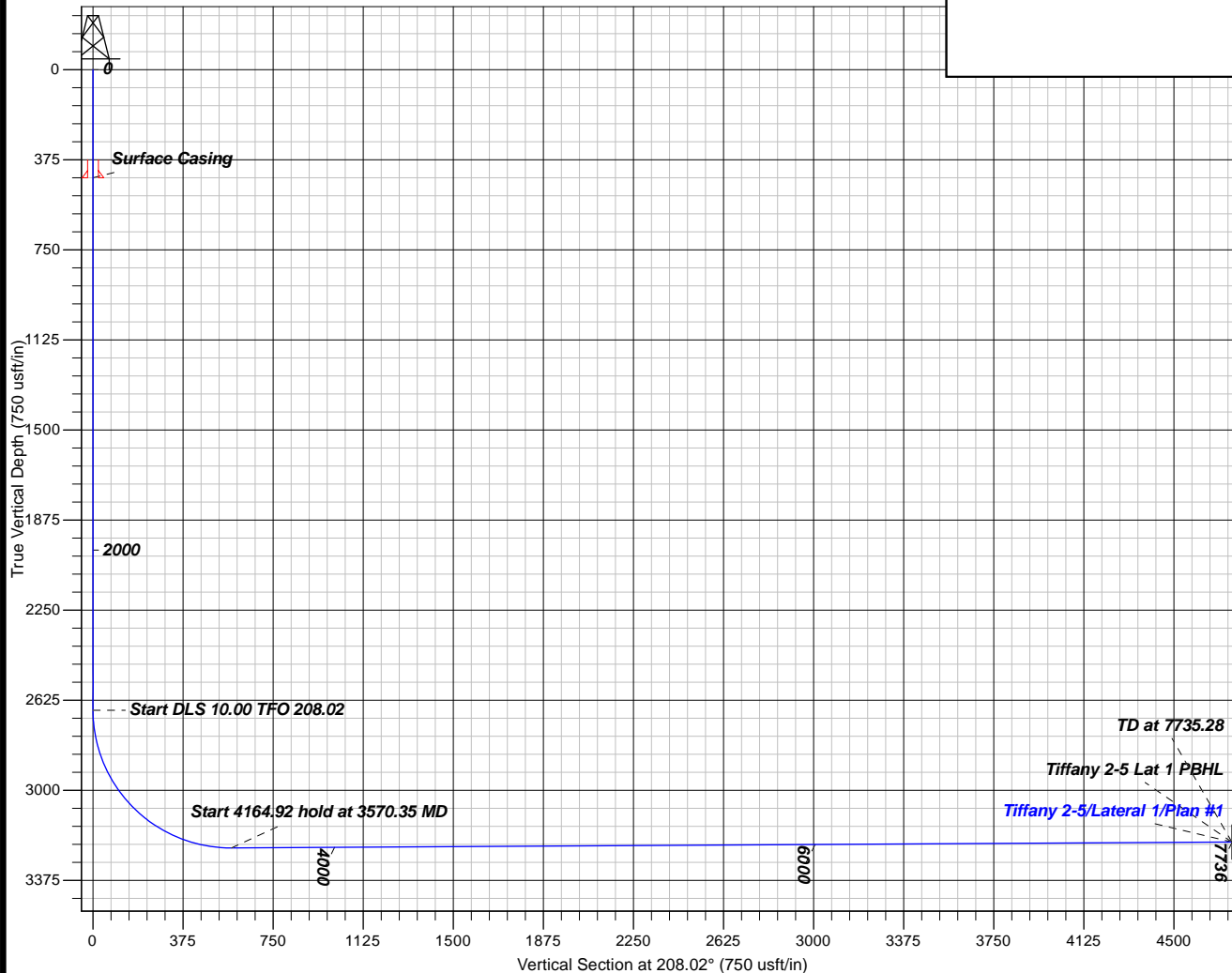
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Tiffany 2-5 Lat 1 PBHL	3216.00	-4185.32	-2227.39	1158990.89	2406520.97	37.0855559	-107.5346179

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
2667.05	0.00	0.00	2667.05	0.00	0.00	0.00	0.00	0.00	
3570.35	90.33	208.02	3240.00	-508.71	-270.73	10.00	208.02	576.26	
7735.28	90.33	208.02	3216.00	-4185.32	-2227.39	0.00	0.00	4741.11	Tiffany 2-5 Lat 1 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 1

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 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 2-5 - 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 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:	2,667.05
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	208.02	

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
2,667.05	0.00	0.00	2,667.05	0.00	0.00	0.00	0.00	0.00	0.00	
3,570.35	90.33	208.02	3,240.00	-508.71	-270.73	10.00	10.00	-16.82	208.02	
7,735.28	90.33	208.02	3,216.00	-4,185.32	-2,227.39	0.00	0.00	0.00	0.00	Tiffany 2-5 Lat 1 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 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)
2,667.05	0.00	0.00	2,667.05	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	3.30	208.02	2,699.98	-0.84	-0.44	0.95	10.00	10.00	0.00
2,800.00	13.30	208.02	2,798.81	-13.56	-7.21	15.36	10.00	10.00	0.00
2,900.00	23.30	208.02	2,893.64	-41.23	-21.94	46.71	10.00	10.00	0.00
3,000.00	33.30	208.02	2,981.58	-83.02	-44.18	94.05	10.00	10.00	0.00
3,100.00	43.30	208.02	3,059.96	-137.66	-73.26	155.94	10.00	10.00	0.00
3,200.00	53.30	208.02	3,126.40	-203.48	-108.29	230.50	10.00	10.00	0.00
3,300.00	63.30	208.02	3,178.89	-278.49	-148.21	315.47	10.00	10.00	0.00
3,400.00	73.30	208.02	3,215.83	-360.40	-191.80	408.26	10.00	10.00	0.00
3,500.00	83.30	208.02	3,236.09	-446.74	-237.75	506.06	10.00	10.00	0.00
3,570.35	90.33	208.02	3,240.00	-508.71	-270.73	576.26	10.00	10.00	0.00
3,600.00	90.33	208.02	3,239.83	-534.88	-284.66	605.91	0.00	0.00	0.00
3,700.00	90.33	208.02	3,239.25	-623.15	-331.64	705.91	0.00	0.00	0.00
3,800.00	90.33	208.02	3,238.68	-711.43	-378.62	805.90	0.00	0.00	0.00
3,900.00	90.33	208.02	3,238.10	-799.70	-425.60	905.90	0.00	0.00	0.00
4,000.00	90.33	208.02	3,237.52	-887.98	-472.58	1,005.90	0.00	0.00	0.00
4,100.00	90.33	208.02	3,236.95	-976.26	-519.55	1,105.90	0.00	0.00	0.00
4,200.00	90.33	208.02	3,236.37	-1,064.53	-566.53	1,205.90	0.00	0.00	0.00
4,300.00	90.33	208.02	3,235.79	-1,152.81	-613.51	1,305.90	0.00	0.00	0.00
4,400.00	90.33	208.02	3,235.22	-1,241.08	-660.49	1,405.89	0.00	0.00	0.00
4,500.00	90.33	208.02	3,234.64	-1,329.36	-707.47	1,505.89	0.00	0.00	0.00
4,600.00	90.33	208.02	3,234.07	-1,417.63	-754.45	1,605.89	0.00	0.00	0.00
4,700.00	90.33	208.02	3,233.49	-1,505.91	-801.43	1,705.89	0.00	0.00	0.00
4,800.00	90.33	208.02	3,232.91	-1,594.19	-848.41	1,805.89	0.00	0.00	0.00
4,900.00	90.33	208.02	3,232.34	-1,682.46	-895.39	1,905.89	0.00	0.00	0.00
5,000.00	90.33	208.02	3,231.76	-1,770.74	-942.37	2,005.88	0.00	0.00	0.00
5,100.00	90.33	208.02	3,231.18	-1,859.01	-989.35	2,105.88	0.00	0.00	0.00
5,200.00	90.33	208.02	3,230.61	-1,947.29	-1,036.33	2,205.88	0.00	0.00	0.00
5,300.00	90.33	208.02	3,230.03	-2,035.56	-1,083.31	2,305.88	0.00	0.00	0.00
5,400.00	90.33	208.02	3,229.46	-2,123.84	-1,130.29	2,405.88	0.00	0.00	0.00
5,500.00	90.33	208.02	3,228.88	-2,212.12	-1,177.27	2,505.88	0.00	0.00	0.00
5,600.00	90.33	208.02	3,228.30	-2,300.39	-1,224.25	2,605.87	0.00	0.00	0.00
5,700.00	90.33	208.02	3,227.73	-2,388.67	-1,271.23	2,705.87	0.00	0.00	0.00
5,800.00	90.33	208.02	3,227.15	-2,476.94	-1,318.21	2,805.87	0.00	0.00	0.00
5,900.00	90.33	208.02	3,226.57	-2,565.22	-1,365.19	2,905.87	0.00	0.00	0.00
6,000.00	90.33	208.02	3,226.00	-2,653.49	-1,412.17	3,005.87	0.00	0.00	0.00
6,100.00	90.33	208.02	3,225.42	-2,741.77	-1,459.15	3,105.87	0.00	0.00	0.00
6,200.00	90.33	208.02	3,224.85	-2,830.04	-1,506.12	3,205.86	0.00	0.00	0.00
6,300.00	90.33	208.02	3,224.27	-2,918.32	-1,553.10	3,305.86	0.00	0.00	0.00
6,400.00	90.33	208.02	3,223.69	-3,006.60	-1,600.08	3,405.86	0.00	0.00	0.00
6,500.00	90.33	208.02	3,223.12	-3,094.87	-1,647.06	3,505.86	0.00	0.00	0.00
6,600.00	90.33	208.02	3,222.54	-3,183.15	-1,694.04	3,605.86	0.00	0.00	0.00
6,700.00	90.33	208.02	3,221.97	-3,271.42	-1,741.02	3,705.86	0.00	0.00	0.00
6,800.00	90.33	208.02	3,221.39	-3,359.70	-1,788.00	3,805.85	0.00	0.00	0.00
6,900.00	90.33	208.02	3,220.81	-3,447.97	-1,834.98	3,905.85	0.00	0.00	0.00
7,000.00	90.33	208.02	3,220.24	-3,536.25	-1,881.96	4,005.85	0.00	0.00	0.00
7,100.00	90.33	208.02	3,219.66	-3,624.53	-1,928.94	4,105.85	0.00	0.00	0.00
7,200.00	90.33	208.02	3,219.08	-3,712.80	-1,975.92	4,205.85	0.00	0.00	0.00
7,300.00	90.33	208.02	3,218.51	-3,801.08	-2,022.90	4,305.85	0.00	0.00	0.00
7,400.00	90.33	208.02	3,217.93	-3,889.35	-2,069.88	4,405.84	0.00	0.00	0.00
7,500.00	90.33	208.02	3,217.36	-3,977.63	-2,116.86	4,505.84	0.00	0.00	0.00
7,600.00	90.33	208.02	3,216.78	-4,065.90	-2,163.84	4,605.84	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 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)
7,700.00	90.33	208.02	3,216.20	-4,154.18	-2,210.82	4,705.84	0.00	0.00	0.00
7,735.28	90.33	208.02	3,216.00	-4,185.32	-2,227.39	4,741.11	0.00	0.00	0.00
Tiffany 2-5 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 2-5 Lat 1 PBHL - plan hits target center - Point	0.00	360.00	3,216.00	-4,185.32	-2,227.39	1,158,990.89	2,406,520.97	37.0855559	-107.5346180

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