



Company: B.P.  
Project: La Plata County, CO NAD83  
Site: Tiffany Pad 3  
Well: Tiffany 3-2



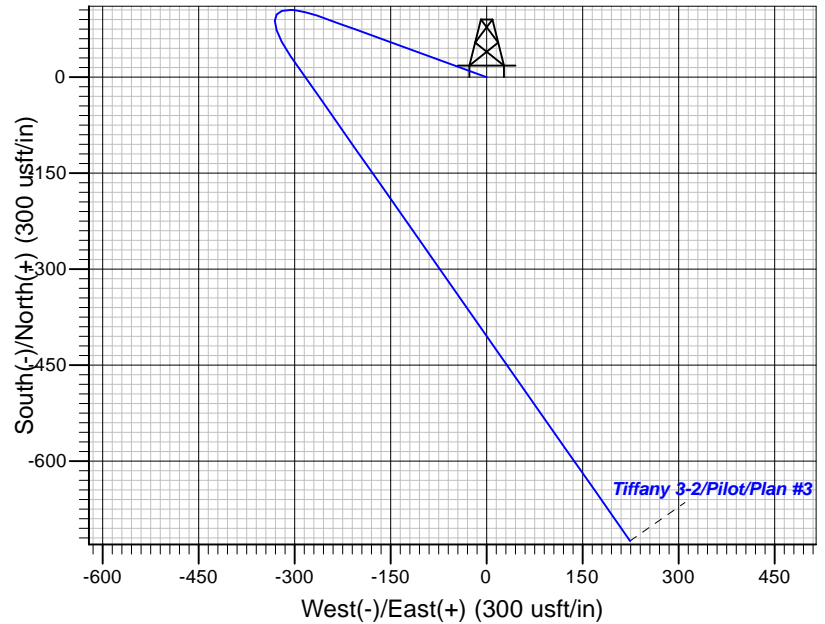
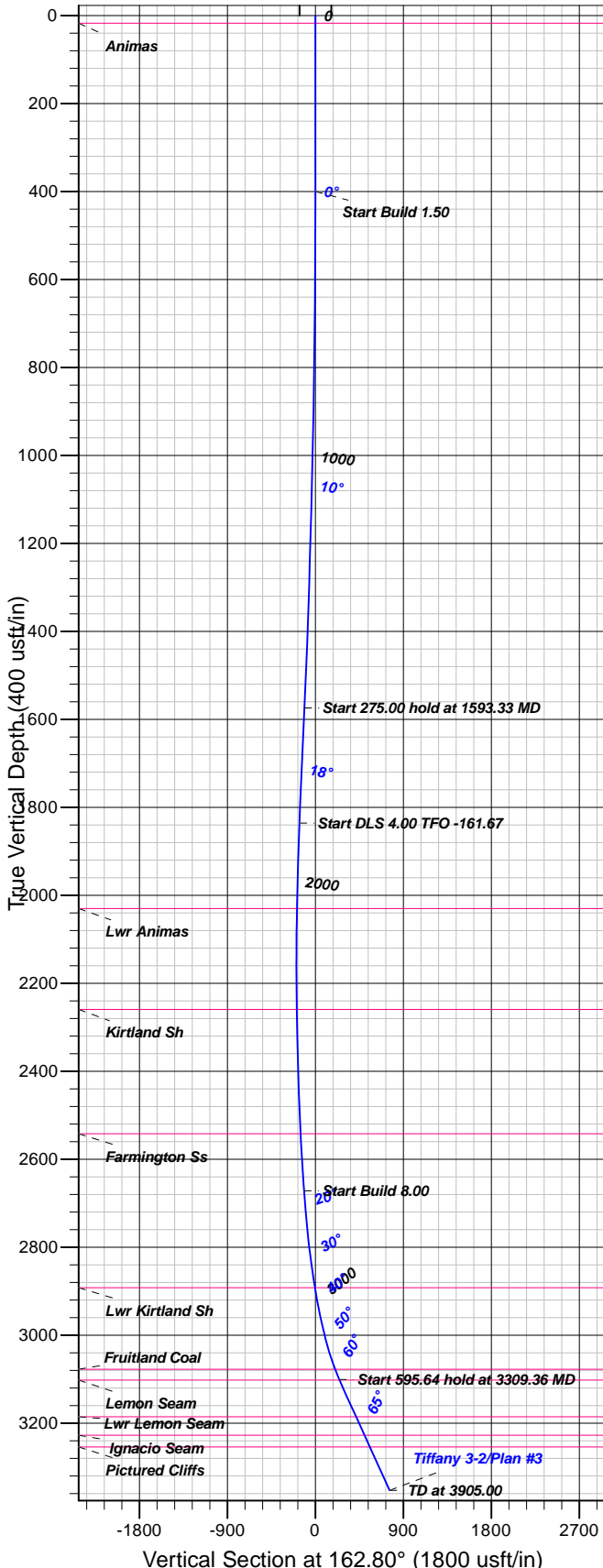
### Well Details: Tiffany 3-2

GL 6717.01' & RKB 17' @ 6734.01usft (Aztec 777)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1159244.15	2413099.97	37.0866427	-107.5120889	

Azimuths to Grid North  
True North: 1.23°  
Magnetic North: 10.40°

Magnetic Field  
Strength: 50124.8snT  
Dip Angle: 63.63°  
Date: 6/9/2017  
Model: HDGM



### FORMATION TOP DETAILS

TVDPATH	MDPATH	FORMATION
17.00	17.00	Animas
2030.00	2068.87	Lwr Animas
2259.00	2299.88	Kirtland Sh
2542.00	2586.22	Farmington Ss
2892.00	2971.43	Lwr Kirtland Sh
3077.00	3257.71	Fruitland Coal
3102.00	3312.91	Lemon Seam
3185.00	3509.31	Lwr Lemon Seam
3227.00	3608.69	Ignacio Seam
3254.00	3672.58	Pictured Cliffs

### Plan: Plan #3

14:14, October 25 2017  
Created By: Mel Mireles Jr.

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

### CASING DETAILS

No casing data is available

### SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	
3	1593.33	17.90	290.00	1574.02	63.24	-173.75	1.50	290.00	-111.78	
4	1868.33	17.90	290.00	1835.70	92.15	-253.17	0.00	0.00	-162.89	
5	2720.61	17.90	145.00	2671.53	27.74	-302.59	4.00	-161.67	-115.97	
6	3309.36	65.00	145.00	3100.50	-282.59	-85.29	8.00	0.00	244.74	
7	3905.00	65.00	145.00	3352.23	-724.80	224.35	0.00	0.00	758.73	

### DESIGN TARGET DETAILS

No target data is available.



**B.P.**

**La Plata County, CO NAD83**

**Tiffany Pad 3**

**Tiffany 3-2**

**Pilot**

**Plan: Plan #3**

## **Standard Planning Report**

**25 October, 2017**





<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well Tiffany 3-2
<b>Company:</b>	B.P.	<b>TVD Reference:</b>	GL 6717.01' & RKB 17' @ 6734.01usft (Aztec 777)
<b>Project:</b>	La Plata County, CO NAD83	<b>MD Reference:</b>	GL 6717.01' & RKB 17' @ 6734.01usft (Aztec 777)
<b>Site:</b>	Tiffany Pad 3	<b>North Reference:</b>	Grid
<b>Well:</b>	Tiffany 3-2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Pilot		
<b>Design:</b>	Plan #3		

<b>Project</b>	La Plata County, CO NAD83		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Southern Zone		

Site		Tiffany Pad 3				
Site Position:		Northing:	1,159,281.94 usft	Latitude:	37.0867476	
From:	Map	Easting:	2,413,119.43 usft	Longitude:	-107.5120251	
Position Uncertainty:		0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	-1.23 °

Well	Tiffany 3-2					
Well Position	+N/-S	-37.79 usft	Northing:	1,159,244.15 usft	Latitude:	37.0866426
	+E/-W	-19.46 usft	Easting:	2,413,099.97 usft	Longitude:	-107.5120890
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,717.01 usft

<b>Wellbore</b>	Pilot				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM	6/9/2017	9.17	63.63	50,125

<b>Design</b>	Plan #3			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	162.80

<b>Plan Sections</b>										
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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,593.33	17.90	290.00	1,574.02	63.24	-173.75	1.50	1.50	0.00	290.00	
1,868.33	17.90	290.00	1,835.70	92.15	-253.17	0.00	0.00	0.00	0.00	
2,720.61	17.90	145.00	2,671.53	27.74	-302.59	4.00	0.00	-17.01	-161.67	
3,309.36	65.00	145.00	3,100.50	-282.59	-85.29	8.00	8.00	0.00	0.00	
3,905.00	65.00	145.00	3,352.23	-724.80	224.35	0.00	0.00	0.00	0.00	



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<b>Project:</b>	La Plata County, CO NAD83	<b>MD Reference:</b>	GL 6717.01' & RKB 17' @ 6734.01usft (Aztec 777)
<b>Site:</b>	Tiffany Pad 3	<b>North Reference:</b>	Grid
<b>Well:</b>	Tiffany 3-2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Pilot		
<b>Design:</b>	Plan #3		

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)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
17.00	0.00	0.00	17.00	0.00	0.00	0.00	0.00	0.00	0.00	
<b>Animas</b>										
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	1.50	290.00	499.99	0.45	-1.23	-0.79	1.50	1.50	0.00	
600.00	3.00	290.00	599.91	1.79	-4.92	-3.16	1.50	1.50	0.00	
700.00	4.50	290.00	699.69	4.03	-11.06	-7.12	1.50	1.50	0.00	
800.00	6.00	290.00	799.27	7.16	-19.66	-12.65	1.50	1.50	0.00	
900.00	7.50	290.00	898.57	11.18	-30.71	-19.76	1.50	1.50	0.00	
1,000.00	9.00	290.00	997.54	16.08	-44.19	-28.43	1.50	1.50	0.00	
1,100.00	10.50	290.00	1,096.09	21.88	-60.10	-38.67	1.50	1.50	0.00	
1,200.00	12.00	290.00	1,194.16	28.55	-78.44	-50.46	1.50	1.50	0.00	
1,300.00	13.50	290.00	1,291.70	36.10	-99.17	-63.81	1.50	1.50	0.00	
1,400.00	15.00	290.00	1,388.62	44.52	-122.30	-78.69	1.50	1.50	0.00	
1,500.00	16.50	290.00	1,484.86	53.80	-147.81	-95.10	1.50	1.50	0.00	
1,593.33	17.90	290.00	1,574.02	63.24	-173.75	-111.78	1.50	1.50	0.00	
1,600.00	17.90	290.00	1,580.36	63.94	-175.67	-113.02	0.00	0.00	0.00	
1,700.00	17.90	290.00	1,675.52	74.45	-204.55	-131.61	0.00	0.00	0.00	
1,800.00	17.90	290.00	1,770.68	84.96	-233.43	-150.19	0.00	0.00	0.00	
1,868.33	17.90	290.00	1,835.70	92.15	-253.17	-162.89	0.00	0.00	0.00	
1,900.00	16.70	288.61	1,865.94	95.26	-262.06	-168.49	4.00	-3.78	-4.38	
2,000.00	13.00	282.63	1,962.59	102.31	-286.66	-182.50	4.00	-3.70	-5.99	
2,068.87	10.58	276.17	2,030.00	104.69	-300.51	-188.86	4.00	-3.52	-9.38	
<b>Lwr Animas</b>										
2,100.00	9.54	272.21	2,060.65	105.09	-305.93	-190.86	4.00	-3.33	-12.71	
2,200.00	6.71	251.84	2,159.66	103.59	-319.77	-193.51	4.00	-2.84	-20.37	
2,299.88	5.55	215.26	2,259.00	97.83	-328.11	-190.47	4.00	-1.16	-36.62	
<b>Kirtland Sh</b>										
2,300.00	5.55	215.21	2,259.12	97.82	-328.12	-190.46	4.00	0.16	-41.31	
2,400.00	6.97	180.14	2,358.56	87.80	-330.92	-181.72	4.00	1.41	-35.07	
2,500.00	9.91	161.29	2,457.48	73.58	-328.18	-167.33	4.00	2.94	-18.85	
2,586.22	12.90	152.58	2,542.00	58.00	-321.36	-150.43	4.00	3.48	-10.10	
<b>Farmington Ss</b>										
2,600.00	13.40	151.55	2,555.41	55.23	-319.89	-147.35	4.00	3.62	-7.47	
2,700.00	17.12	145.88	2,651.88	32.85	-306.11	-121.89	4.00	3.72	-5.67	
2,720.61	17.90	145.00	2,671.53	27.74	-302.59	-115.97	4.00	3.79	-4.27	
2,800.00	24.25	145.00	2,745.57	4.37	-286.22	-88.81	8.00	8.00	0.00	
2,900.00	32.25	145.00	2,833.59	-34.37	-259.10	-43.77	8.00	8.00	0.00	
2,971.43	37.97	145.00	2,892.00	-68.01	-235.54	-4.68	8.00	8.00	0.00	
<b>Lwr Kirtland Sh</b>										
3,000.00	40.25	145.00	2,914.17	-82.77	-225.21	12.48	8.00	8.00	0.00	
3,100.00	48.25	145.00	2,985.74	-139.89	-185.21	78.87	8.00	8.00	0.00	
3,200.00	56.25	145.00	3,046.91	-204.61	-139.90	154.09	8.00	8.00	0.00	
3,257.71	60.87	145.00	3,077.00	-244.93	-111.67	200.96	8.00	8.00	0.00	
<b>Fruitland Coal</b>										
3,300.00	64.25	145.00	3,096.49	-275.67	-90.14	236.69	8.00	8.00	0.00	
3,309.36	65.00	145.00	3,100.50	-282.59	-85.29	244.74	8.00	8.00	0.00	
3,312.91	65.00	145.00	3,102.00	-285.23	-83.44	247.81	0.00	0.00	0.00	
<b>Lemon Seam</b>										



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<b>Wellbore:</b>	Pilot		
<b>Design:</b>	Plan #3		

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)
3,400.00	65.00	145.00	3,138.80	-349.89	-38.17	322.95	0.00	0.00	0.00
3,500.00	65.00	145.00	3,181.07	-424.13	13.81	409.25	0.00	0.00	0.00
3,509.31	65.00	145.00	3,185.00	-431.04	18.65	417.28	0.00	0.00	0.00
<b>Lwr Lemon Seam</b>									
3,600.00	65.00	145.00	3,223.33	-498.37	65.80	495.54	0.00	0.00	0.00
3,608.69	65.00	145.00	3,227.00	-504.82	70.31	503.04	0.00	0.00	0.00
<b>Ignacio Seam</b>									
3,672.58	65.00	145.00	3,254.00	-552.25	103.52	558.17	0.00	0.00	0.00
<b>Pictured Cliffs</b>									
3,700.00	65.00	145.00	3,265.59	-572.61	117.78	581.83	0.00	0.00	0.00
3,800.00	65.00	145.00	3,307.85	-646.85	169.76	668.12	0.00	0.00	0.00
3,900.00	65.00	145.00	3,350.11	-721.09	221.75	754.41	0.00	0.00	0.00
3,905.00	65.00	145.00	3,352.23	-724.80	224.35	758.73	0.00	0.00	0.00