
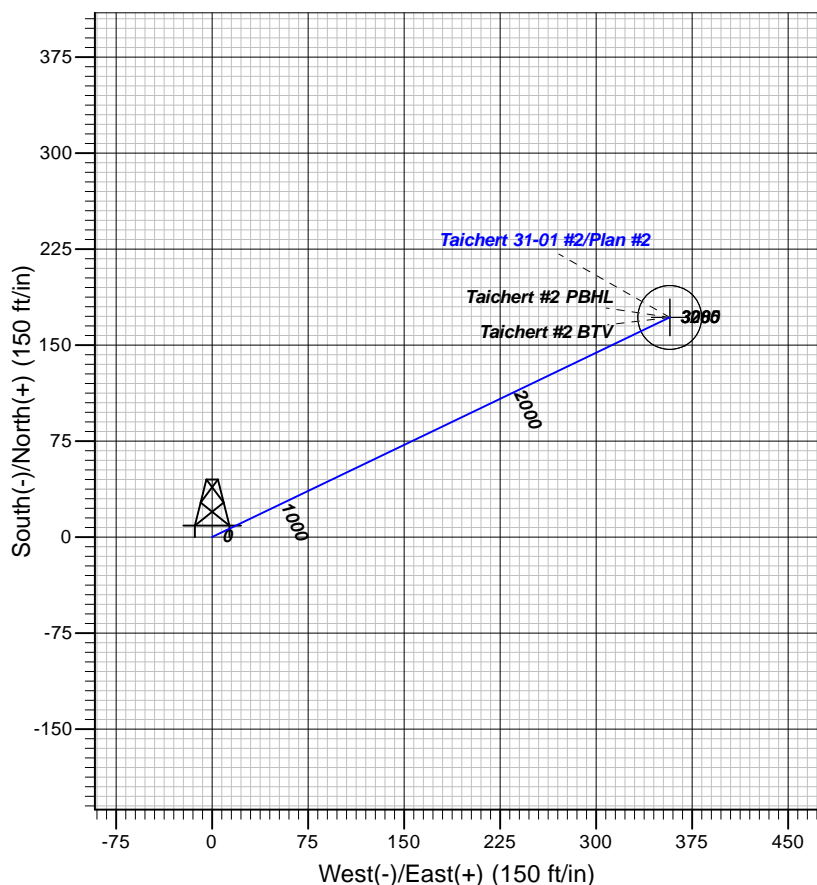
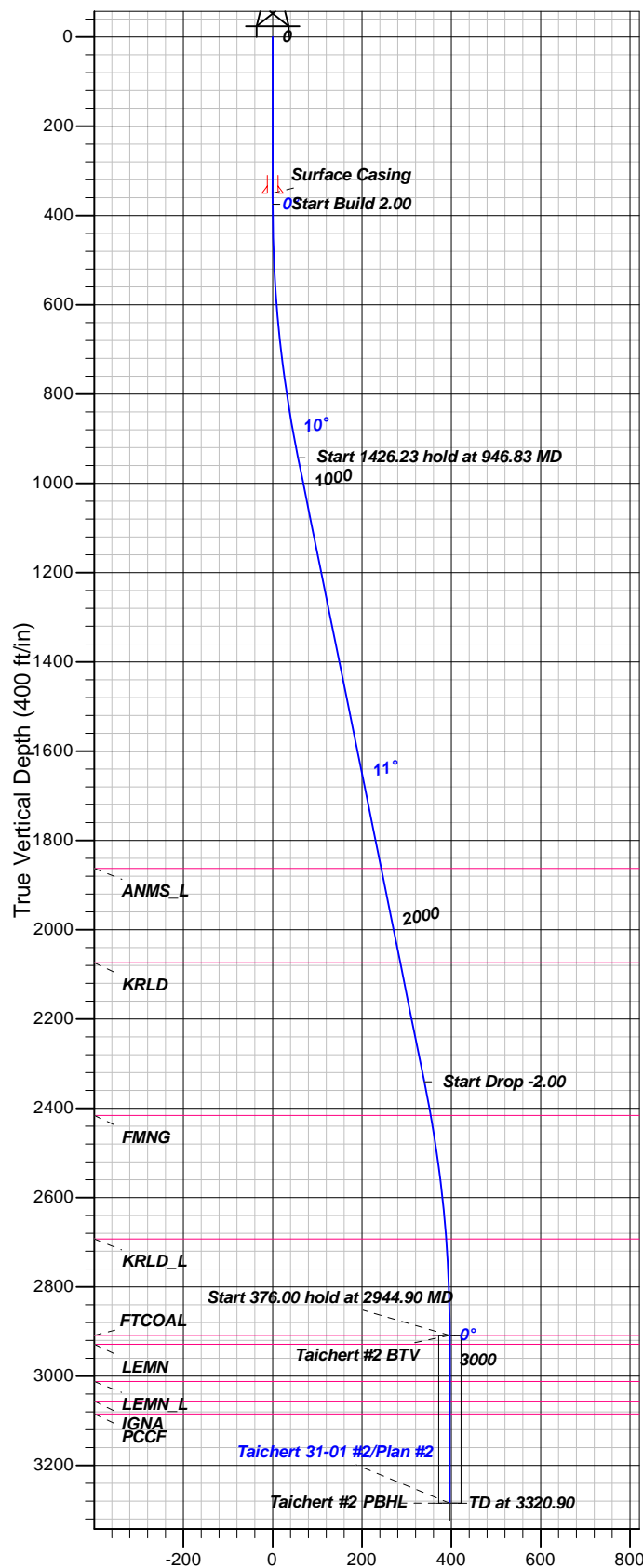


## Well Details: Taichert 31-01 #2

GL 6601' & RKB 11' @ 6612.00ft (Aztec 507)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1149682.53	2402643.85	37.0597651	-107.5472063	

**Azimuths to Grid North**  
True North: 1.26°  
Magnetic North: 10.74°  
Magnetic Field  
Strength: 50464.1nT  
Dip Angle: 63.70°  
Date: 3/12/2015  
Model: BGGM2014

### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1863.00	1885.43	ANMS_L
2074.00	2100.70	KRLD
2416.00	2449.43	FMNG
2693.00	2728.69	KRLD_L
2909.00	2944.90	FTCOAL
2929.00	2964.90	LEMN
3012.00	3047.90	LEMN_L
3056.00	3091.90	IGNA
3085.00	3120.90	PCCF

### Plan: Plan #2

14:12, March 13 2015  
Created By: Janie Collins

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

TVD	MD	Name	Size
350.00	350.00	Surface Casing	9.625

### SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	375.00	0.00	0.00	375.00	0.00	0.00	0.00	0.00	0.00	
3	946.83	11.44	64.37	943.04	24.60	51.29	2.00	64.37	56.88	
4	2373.07	11.44	64.37	2340.96	146.92	306.27	0.00	0.00	339.68	
5	2944.90	0.00	0.00	2909.00	171.52	357.55	2.00	180.00	396.56	Taichert #2 BTV
6	3320.90	0.00	0.00	3285.00	171.52	357.55	0.00	0.00	396.56	Taichert #2 PBHL

### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Taichert #2 BTV	2909.00	171.52	357.55	1149854.05	2403001.40	37.0602576	-107.5459942	Circle (Radius: 25.00)
- plan hits target center								
Taichert #2 PBHL	3285.00	171.52	357.55	1149854.05	2403001.40	37.0602576	-107.5459942	Point
- plan hits target center								



**B.P.**

**La Plata County, CO NAD83**

**SEC 31-T33N-R6W**

**Taichert 31-01 #2**

**OH**

**Plan: Plan #2**

## **Standard Planning Report**

**13 March, 2015**





<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well Taichert 31-01 #2
<b>Company:</b>	B.P.	<b>TVD Reference:</b>	GL 6601' & RKB 11' @ 6612.00ft (Aztec 507)
<b>Project:</b>	La Plata County, CO NAD83	<b>MD Reference:</b>	GL 6601' & RKB 11' @ 6612.00ft (Aztec 507)
<b>Site:</b>	SEC 31-T33N-R6W	<b>North Reference:</b>	<b>Grid</b>
<b>Well:</b>	Taichert 31-01 #2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #2		

<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		Using Well Reference Point
<b>Map Zone:</b>	Colorado Southern Zone		

<b>Site</b>	SEC 31-T33N-R6W			
<b>Site Position:</b>		<b>Northing:</b>	1,149,682.54 usft	<b>Latitude:</b> 37.0597651
<b>From:</b>	Lat/Long	<b>Easting:</b>	2,402,643.85 usft	<b>Longitude:</b> -107.5472063
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> -1.26 °

<b>Well</b>	Taichert 31-01 #2			
<b>Well Position</b>	<b>+N/-S</b>	-0.01 ft	<b>Northing:</b>	1,149,682.53 usft
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	2,402,643.85 usft
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	0.00 ft
			<b>Ground Level:</b>	6,601.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	BGGM2014	3/12/2015	9.48	63.70	50,464

<b>Design</b>	Plan #2			
<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) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	64.37

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
375.00	0.00	0.00	375.00	0.00	0.00	0.00	0.00	0.00	0.00	
946.83	11.44	64.37	943.04	24.60	51.29	2.00	2.00	0.00	64.37	
2,373.07	11.44	64.37	2,340.96	146.92	306.27	0.00	0.00	0.00	0.00	
2,944.90	0.00	0.00	2,909.00	171.52	357.55	2.00	-2.00	0.00	180.00	Taichert #2 BTV
3,320.90	0.00	0.00	3,285.00	171.52	357.55	0.00	0.00	0.00	0.00	Taichert #2 PBHL



<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well Taichert 31-01 #2
<b>Company:</b>	B.P.	<b>TVD Reference:</b>	GL 6601' & RKB 11' @ 6612.00ft (Aztec 507)
<b>Project:</b>	La Plata County, CO NAD83	<b>MD Reference:</b>	GL 6601' & RKB 11' @ 6612.00ft (Aztec 507)
<b>Site:</b>	SEC 31-T33N-R6W	<b>North Reference:</b>	Grid
<b>Well:</b>	Taichert 31-01 #2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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
350.00	0.00	0.00	350.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Surface Casing</b>									
375.00	0.00	0.00	375.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
400.00	0.50	64.37	400.00	0.05	0.10	0.11	2.00	2.00	0.00
500.00	2.50	64.37	499.96	1.18	2.46	2.73	2.00	2.00	0.00
600.00	4.50	64.37	599.77	3.82	7.96	8.83	2.00	2.00	0.00
700.00	6.50	64.37	699.30	7.96	16.60	18.42	2.00	2.00	0.00
800.00	8.50	64.37	798.44	13.61	28.37	31.47	2.00	2.00	0.00
900.00	10.50	64.37	897.07	20.75	43.25	47.97	2.00	2.00	0.00
946.83	11.44	64.37	943.04	24.60	51.29	56.88	2.00	2.00	0.00
<b>Start 1426.23 hold at 946.83 MD</b>									
1,000.00	11.44	64.37	995.15	29.16	60.79	67.42	0.00	0.00	0.00
1,100.00	11.44	64.37	1,093.17	37.74	78.67	87.25	0.00	0.00	0.00
1,200.00	11.44	64.37	1,191.18	46.31	96.55	107.08	0.00	0.00	0.00
1,300.00	11.44	64.37	1,289.20	54.89	114.42	126.91	0.00	0.00	0.00
1,400.00	11.44	64.37	1,387.21	63.47	132.30	146.74	0.00	0.00	0.00
1,500.00	11.44	64.37	1,485.23	72.04	150.18	166.57	0.00	0.00	0.00
1,600.00	11.44	64.37	1,583.24	80.62	168.06	186.39	0.00	0.00	0.00
1,700.00	11.44	64.37	1,681.26	89.20	185.94	206.22	0.00	0.00	0.00
1,800.00	11.44	64.37	1,779.27	97.77	203.81	226.05	0.00	0.00	0.00
1,885.43	11.44	64.37	1,863.00	105.10	219.09	242.99	0.00	0.00	0.00
<b>ANMS_L</b>									
1,900.00	11.44	64.37	1,877.28	106.35	221.69	245.88	0.00	0.00	0.00
2,000.00	11.44	64.37	1,975.30	114.92	239.57	265.71	0.00	0.00	0.00
2,100.00	11.44	64.37	2,073.31	123.50	257.45	285.54	0.00	0.00	0.00
2,100.70	11.44	64.37	2,074.00	123.56	257.57	285.68	0.00	0.00	0.00
<b>KRLD</b>									
2,200.00	11.44	64.37	2,171.33	132.08	275.32	305.36	0.00	0.00	0.00
2,300.00	11.44	64.37	2,269.34	140.65	293.20	325.19	0.00	0.00	0.00
2,373.07	11.44	64.37	2,340.96	146.92	306.27	339.68	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
2,400.00	10.90	64.37	2,367.38	149.17	310.97	344.90	2.00	-2.00	0.00
2,449.43	9.91	64.37	2,416.00	153.04	319.02	353.82	2.00	-2.00	0.00
<b>FMNG</b>									
2,500.00	8.90	64.37	2,465.89	156.61	326.47	362.09	2.00	-2.00	0.00
2,600.00	6.90	64.37	2,564.93	162.55	338.85	375.83	2.00	-2.00	0.00
2,700.00	4.90	64.37	2,664.40	167.00	348.12	386.10	2.00	-2.00	0.00
2,728.69	4.32	64.37	2,693.00	167.99	350.20	388.41	2.00	-2.00	0.00
<b>KRLD_L</b>									
2,800.00	2.90	64.37	2,764.16	169.94	354.25	392.90	2.00	-2.00	0.00
2,900.00	0.90	64.37	2,864.10	171.37	357.23	396.21	2.00	-2.00	0.00
2,944.90	0.00	0.00	2,909.00	171.52	357.55	396.56	2.00	-2.00	0.00
<b>Start 376.00 hold at 2944.90 MD - FTCoAL - Taichert #2 BTV</b>									
2,964.90	0.00	0.00	2,929.00	171.52	357.55	396.56	0.00	0.00	0.00
<b>LEMN</b>									
3,000.00	0.00	0.00	2,964.10	171.52	357.55	396.56	0.00	0.00	0.00
3,047.90	0.00	0.00	3,012.00	171.52	357.55	396.56	0.00	0.00	0.00
<b>LEMN_L</b>									



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<b>Project:</b>	La Plata County, CO NAD83	<b>MD Reference:</b>	GL 6601' & RKB 11' @ 6612.00ft (Aztec 507)
<b>Site:</b>	SEC 31-T33N-R6W	<b>North Reference:</b>	Grid
<b>Well:</b>	Taichert 31-01 #2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #2		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
3,091.90	0.00	0.00	3,056.00	171.52	357.55	396.56	0.00	0.00	0.00
IGNA									
3,100.00	0.00	0.00	3,064.10	171.52	357.55	396.56	0.00	0.00	0.00
3,120.90	0.00	0.00	3,085.00	171.52	357.55	396.56	0.00	0.00	0.00
PCCF									
3,200.00	0.00	0.00	3,164.10	171.52	357.55	396.56	0.00	0.00	0.00
3,300.00	0.00	0.00	3,264.10	171.52	357.55	396.56	0.00	0.00	0.00
3,320.90	0.00	0.00	3,285.00	171.52	357.55	396.56	0.00	0.00	0.00
TD at 3320.90 - Taichert #2 PBHL									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Taichert #2 BTV - plan hits target center - Circle (radius 25.00)	0.00	1.25	2,909.00	171.52	357.55	1,149,854.05	2,403,001.40	37.0602575	-107.5459942
Taichert #2 PBHL - plan hits target center - Point	0.00	1.25	3,285.00	171.52	357.55	1,149,854.05	2,403,001.40	37.0602575	-107.5459942

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
350.00	350.00	Surface Casing	9.625	12.250	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,885.43	1,863.00	ANMS_L		0.00		
2,100.70	2,074.00	KRLD		0.00		
2,449.43	2,416.00	FMNG		0.00		
2,728.69	2,693.00	KRLD_L		0.00		
2,944.90	2,909.00	FTCOAL		0.00		
2,964.90	2,929.00	LEMN		0.00		
3,047.90	3,012.00	LEMN_L		0.00		
3,091.90	3,056.00	IGNA		0.00		
3,120.90	3,085.00	PCCF		0.00		



<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well Taichert 31-01 #2
<b>Company:</b>	B.P.	<b>TVD Reference:</b>	GL 6601' & RKB 11' @ 6612.00ft (Aztec 507)
<b>Project:</b>	La Plata County, CO NAD83	<b>MD Reference:</b>	GL 6601' & RKB 11' @ 6612.00ft (Aztec 507)
<b>Site:</b>	SEC 31-T33N-R6W	<b>North Reference:</b>	Grid
<b>Well:</b>	Taichert 31-01 #2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	Plan #2		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
375.00	375.00	0.00	0.00	Start Build 2.00
946.83	943.04	24.60	51.29	Start 1426.23 hold at 946.83 MD
2,373.07	2,340.96	146.92	306.27	Start Drop -2.00
2,944.90	2,909.00	171.52	357.55	Start 376.00 hold at 2944.90 MD
3,320.90	3,285.00	171.52	357.55	TD at 3320.90