

Well Details: Le Platt B2

GL 6870' & RKB 11' @ 6881.00usft (Aztec 507)

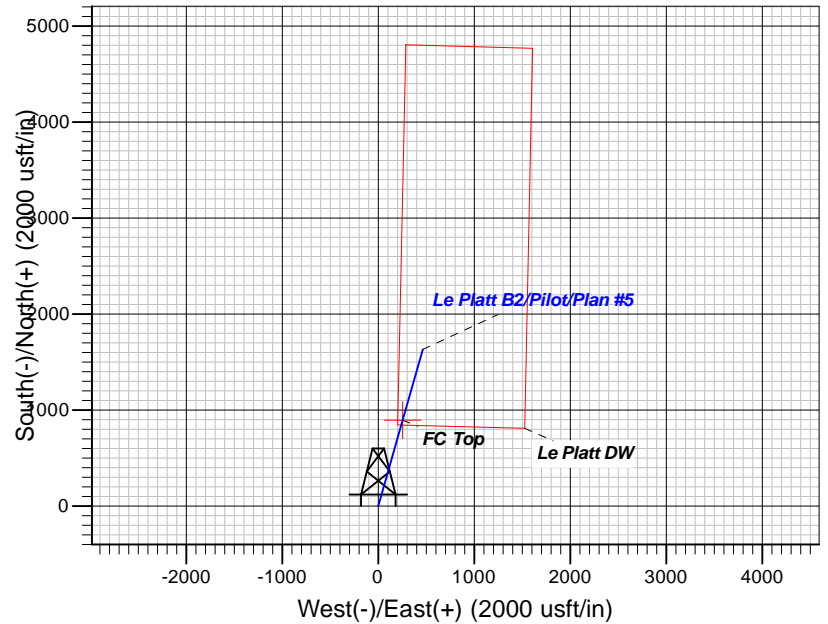
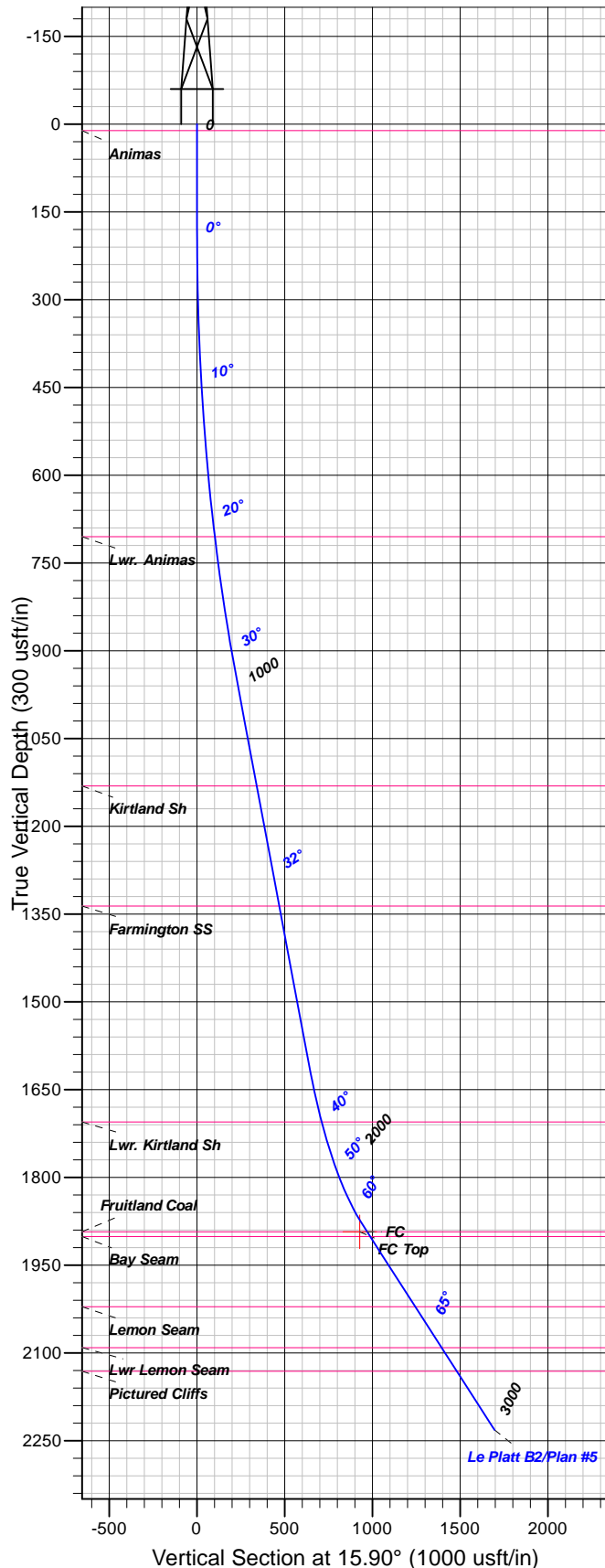
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1208776.39	2387416.08	37.2210906	-107.6039369

Slot



<p>Azimuths to Grid North</p> <p>True North: 1.29°</p> <p>Magnetic North: 10.56°</p>
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Magnetic Field  
Strength: 50221.4snT  
Dip Angle: 63.73°  
Date: 2/14/2017  
Model: HDGM



## FORMATION TOP DETAILS

TVDPath	MDPath	Formation
11.00	11.00	Animas
705.00	717.91	Lwr. Animas
1131.00	1207.24	Kirtland Sh
1336.00	1448.97	Farmington SS
1705.00	1890.38	Lwr. Kirtland Sh
1893.00	2213.39	Fruitland Coal
1901.00	2232.32	Bay Seam
2021.00	2516.26	Lemon Seam
2091.00	2681.89	Lwr Lemon Seam
2131.00	2776.54	Pictured Cliffs

Plan: Plan #5

14:34, September 13 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	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	175.00	0.00	0.00	175.00	0.00	0.00	0.00	0.00	0.00	
3	975.00	32.00	15.90	934.05	209.33	59.63	4.00	15.90	217.66	
4	1775.00	32.00	15.90	1612.49	617.04	175.77	0.00	0.00	641.59	
5	2187.50	65.00	15.90	1882.06	910.08	259.24	8.00	0.00	946.28	
6	3014.00	65.00	15.90	2231.35	1630.48	464.46	0.00	0.00	1695.35	

## DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
FC Top	1893.00	892.64	254.21	1209669.03	2387670.29	37.2235572	-107.6031331	Point
- plan misses target center by 17.68usft at 2176.14usft MD (1877.18 TVD, 900.21 N, 256.43 E)								



**B.P.**

**La Plata County, CO NAD83**

**Le Platt Pad**

**Le Platt B2**

**Pilot**

**Plan: Plan #5**

## **Standard Planning Report**

**13 September, 2017**





<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well Le Platt B2
<b>Company:</b>	B.P.	<b>TVD Reference:</b>	GL 6870' & RKB 11' @ 6881.00usft (Aztec 507)
<b>Project:</b>	La Plata County, CO NAD83	<b>MD Reference:</b>	GL 6870' & RKB 11' @ 6881.00usft (Aztec 507)
<b>Site:</b>	Le Platt Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	Le Platt B2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Pilot		
<b>Design:</b>	Plan #5		

<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	Le Platt Pad					
Site Position:		Northing:	1,208,776.39 usft	Latitude:	37.2210905	
From:	Map	Easting:	2,387,416.08 usft	Longitude:	-107.6039370	
Position Uncertainty:		0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	-1.29 °

Well	Le Platt B2					
Well Position	+N/-S	0.00 usft	Northing:	1,208,776.39 usft	Latitude:	37.2210905
	+E/-W	0.00 usft	Easting:	2,387,416.08 usft	Longitude:	-107.6039370
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,863.00 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	2/14/2017	9.27	63.73	50,221

<b>Design</b>	Plan #5			
<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	15.90

<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	
175.00	0.00	0.00	175.00	0.00	0.00	0.00	0.00	0.00	0.00	
975.00	32.00	15.90	934.05	209.33	59.63	4.00	4.00	0.00	15.90	
1,775.00	32.00	15.90	1,612.49	617.04	175.77	0.00	0.00	0.00	0.00	
2,187.50	65.00	15.90	1,882.06	910.08	259.24	8.00	8.00	0.00	0.00	
3,014.00	65.00	15.90	2,231.35	1,630.48	464.46	0.00	0.00	0.00	0.00	



<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well Le Platt B2
<b>Company:</b>	B.P.	<b>TVD Reference:</b>	GL 6870' & RKB 11' @ 6881.00usft (Aztec 507)
<b>Project:</b>	La Plata County, CO NAD83	<b>MD Reference:</b>	GL 6870' & RKB 11' @ 6881.00usft (Aztec 507)
<b>Site:</b>	Le Platt Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	Le Platt B2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Pilot		
<b>Design:</b>	Plan #5		

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	
11.00	0.00	0.00	11.00	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	
175.00	0.00	0.00	175.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	1.00	15.90	200.00	0.21	0.06	0.22	4.00	4.00	0.00	
300.00	5.00	15.90	299.84	5.24	1.49	5.45	4.00	4.00	0.00	
400.00	9.00	15.90	399.08	16.96	4.83	17.64	4.00	4.00	0.00	
500.00	13.00	15.90	497.22	35.31	10.06	36.71	4.00	4.00	0.00	
600.00	17.00	15.90	593.79	60.19	17.15	62.59	4.00	4.00	0.00	
700.00	21.00	15.90	688.32	91.50	26.06	95.14	4.00	4.00	0.00	
717.91	21.72	15.90	705.00	97.77	27.85	101.66	4.00	4.00	0.00	
<b>Lwr. Animas</b>										
800.00	25.00	15.90	780.36	129.07	36.77	134.20	4.00	4.00	0.00	
900.00	29.00	15.90	869.44	172.72	49.20	179.59	4.00	4.00	0.00	
975.00	32.00	15.90	934.05	209.33	59.63	217.66	4.00	4.00	0.00	
1,000.00	32.00	15.90	955.25	222.07	63.26	230.90	0.00	0.00	0.00	
1,100.00	32.00	15.90	1,040.06	273.03	77.78	283.89	0.00	0.00	0.00	
1,200.00	32.00	15.90	1,124.86	324.00	92.29	336.89	0.00	0.00	0.00	
1,207.24	32.00	15.90	1,131.00	327.69	93.34	340.72	0.00	0.00	0.00	
<b>Kirtland Sh</b>										
1,300.00	32.00	15.90	1,209.67	374.96	106.81	389.88	0.00	0.00	0.00	
1,400.00	32.00	15.90	1,294.47	425.93	121.33	442.87	0.00	0.00	0.00	
1,448.97	32.00	15.90	1,336.00	450.88	128.44	468.82	0.00	0.00	0.00	
<b>Farmington SS</b>										
1,500.00	32.00	15.90	1,379.28	476.89	135.85	495.86	0.00	0.00	0.00	
1,600.00	32.00	15.90	1,464.08	527.86	150.36	548.85	0.00	0.00	0.00	
1,700.00	32.00	15.90	1,548.89	578.82	164.88	601.85	0.00	0.00	0.00	
1,775.00	32.00	15.90	1,612.49	617.04	175.77	641.59	0.00	0.00	0.00	
1,800.00	34.00	15.90	1,633.46	630.14	179.50	655.21	8.00	8.00	0.00	
1,890.38	41.23	15.90	1,705.00	683.15	194.60	710.33	8.00	8.00	0.00	
<b>Lwr. Kirtland Sh</b>										
1,900.00	42.00	15.90	1,712.19	689.30	196.35	716.72	8.00	8.00	0.00	
2,000.00	50.00	15.90	1,781.60	758.43	216.04	788.60	8.00	8.00	0.00	
2,100.00	58.00	15.90	1,840.33	836.17	238.19	869.43	8.00	8.00	0.00	
2,176.76	64.14	15.90	1,877.45	900.75	256.59	936.59	8.00	8.00	0.00	
<b>FC Top</b>										
2,187.50	65.00	15.90	1,882.06	910.08	259.24	946.28	8.00	8.00	0.00	
2,200.00	65.00	15.90	1,887.34	920.97	262.35	957.61	0.00	0.00	0.00	
2,213.39	65.00	15.90	1,893.00	932.64	265.67	969.74	0.00	0.00	0.00	
<b>FC - Fruitland Coal</b>										
2,232.32	65.00	15.90	1,901.00	949.14	270.37	986.90	0.00	0.00	0.00	
<b>Bay Seam</b>										
2,300.00	65.00	15.90	1,929.60	1,008.14	287.18	1,048.24	0.00	0.00	0.00	
2,336.02	65.00	15.90	1,944.83	1,039.53	296.12	1,080.88	0.00	0.00	0.00	
<b>FC Top BTV</b>										
2,400.00	65.00	15.90	1,971.87	1,095.30	312.00	1,138.87	0.00	0.00	0.00	
2,500.00	65.00	15.90	2,014.13	1,182.46	336.83	1,229.50	0.00	0.00	0.00	
2,516.26	65.00	15.90	2,021.00	1,196.64	340.87	1,244.24	0.00	0.00	0.00	
<b>Lemon Seam</b>										
2,600.00	65.00	15.90	2,056.39	1,269.63	361.66	1,320.13	0.00	0.00	0.00	



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<b>Project:</b>	La Plata County, CO NAD83	<b>MD Reference:</b>	GL 6870' & RKB 11' @ 6881.00usft (Aztec 507)
<b>Site:</b>	Le Platt Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	Le Platt B2	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Pilot		
<b>Design:</b>	Plan #5		

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)
2,681.89	65.00	15.90	2,091.00	1,341.01	382.00	1,394.35	0.00	0.00	0.00
<b>Lwr Lemon Seam</b>									
2,700.00	65.00	15.90	2,098.65	1,356.79	386.49	1,410.76	0.00	0.00	0.00
2,776.54	65.00	15.90	2,131.00	1,423.51	405.50	1,480.13	0.00	0.00	0.00
<b>Pictured Cliffs</b>									
2,800.00	65.00	15.90	2,140.91	1,443.95	411.32	1,501.40	0.00	0.00	0.00
2,803.86	65.00	15.90	2,142.54	1,447.32	412.28	1,504.89	0.00	0.00	0.00
<b>FC Top BHL</b>									
2,900.00	65.00	15.90	2,183.18	1,531.12	436.15	1,592.03	0.00	0.00	0.00
3,000.00	65.00	15.90	2,225.44	1,618.28	460.98	1,682.66	0.00	0.00	0.00
3,014.00	65.00	15.90	2,231.35	1,630.48	464.46	1,695.35	0.00	0.00	0.00

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
FC Top	0.00	360.00	1,893.00	892.64	254.21	1,209,669.03	2,387,670.29	37.2235572	-107.6031332
- plan misses target center by 17.70usft at 2176.76usft MD (1877.45 TVD, 900.75 N, 256.59 E)									
- Point									

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
11.00	11.00	Animas		0.00	360.00	
717.91	705.00	Lwr. Animas		0.00	360.00	
1,207.24	1,131.00	Kirtland Sh		0.00	360.00	
1,448.97	1,336.00	Farmington SS		0.00	360.00	
1,890.38	1,705.00	Lwr. Kirtland Sh		0.00	360.00	
2,213.39	1,893.00	Fruitland Coal		0.00	360.00	
2,232.32	1,901.00	Bay Seam		0.00	360.00	
2,516.26	2,021.00	Lemon Seam		0.00	360.00	
2,681.89	2,091.00	Lwr Lemon Seam		0.00	360.00	
2,776.54	2,131.00	Pictured Cliffs		0.00	360.00	

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
2,213.39	1,893.00	932.64	265.67	FC	