



Company: B.P.
Project: La Plata County, CO NAD83
Site: Luchini Pad
Well: Luchini 36-06-12 2
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: 1.19°
Magnetic North: 10.36°

Magnetic Field
Strength: 50138.6snT
Dip Angle: 63.60°
Date: 3/24/2017
Model: HDGM

WELL DETAILS: Luchini 36-06-12 2

GL 6266' & RKB 11' @ 6277.00usft (Aztec 507)
+N/-S +E/-W Northing Easting Latitude Longitude
0.00 0.00 1139306.97 2433750.94 37.0330995 -107.4398920

Plan: Plan #1 (Luchini 36-06-12 2/Lateral 1)

Created By: Janie Collins Date: 16:16, October 09 2017

DESIGN TARGET DETAILS

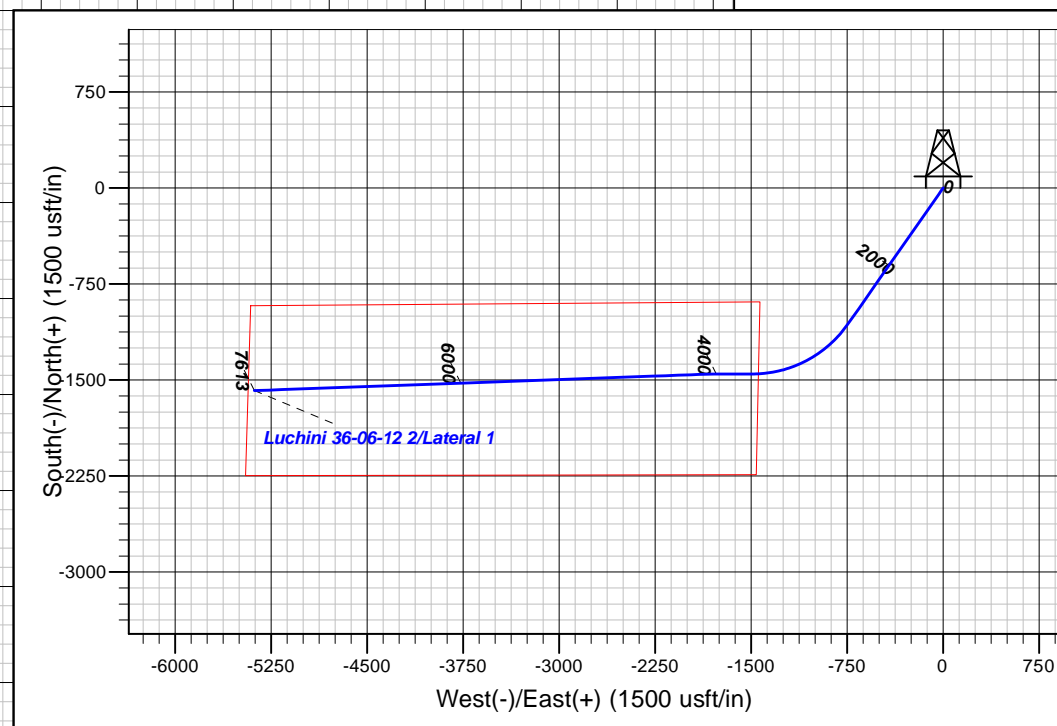
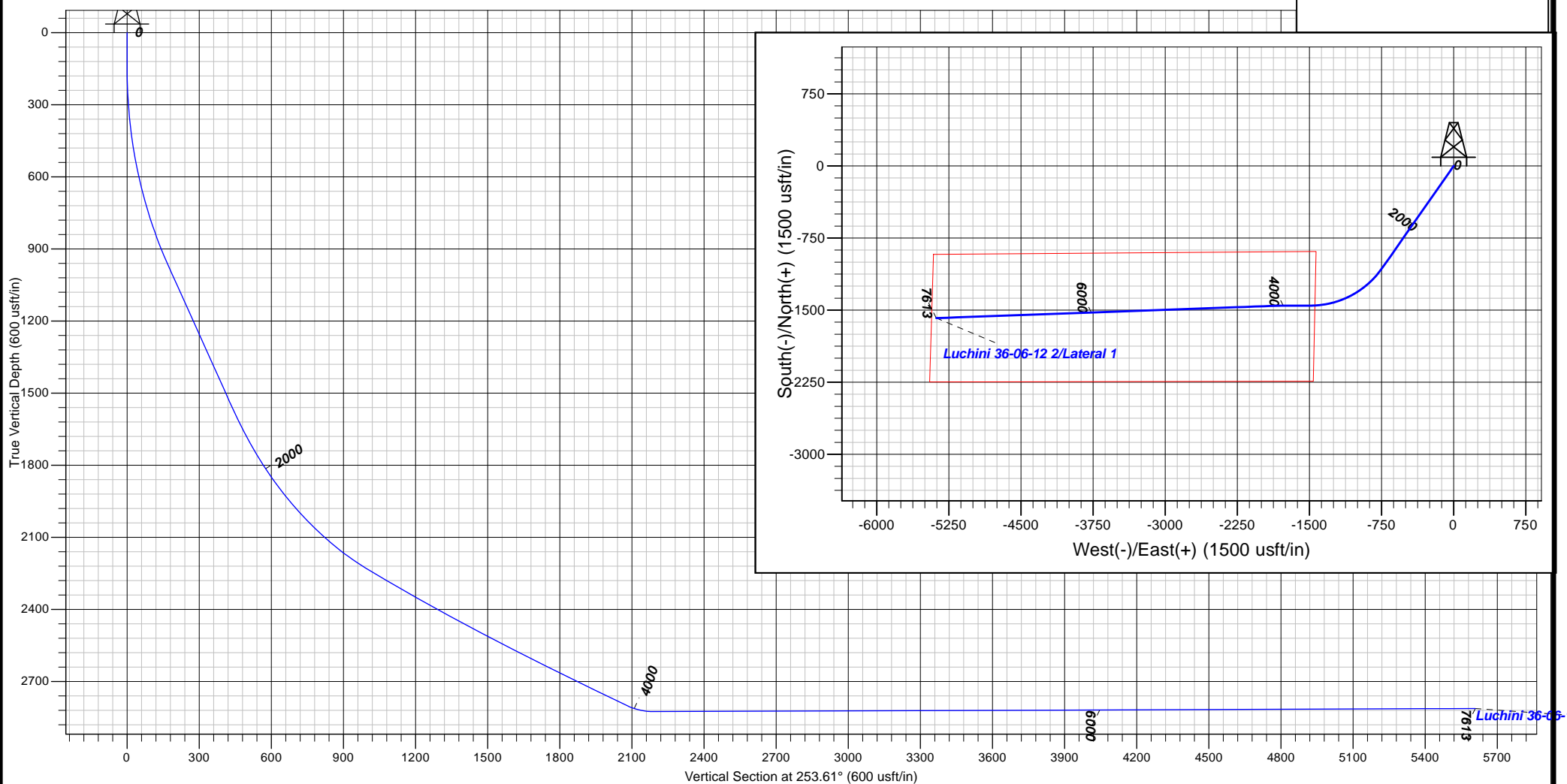
Name TVD +N/-S +E/-W Northing Easting
Luchini Lat 1 PBHL 2812.00 -1583.04 -5380.62 1137723.93 2428370.32

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
3961.53	65.00	270.00	2798.08	-1452.95	-1735.92	0.00	0.00	2075.43	
4087.99	90.21	267.92	2825.00	-1455.28	-1858.40	20.00	-4.87	2193.60	
7612.54	90.21	267.92	2812.00	-1583.04	-5380.62	0.00	0.00	5608.66	Luchini Lat 1 PBHL

FORMATION TOP DETAILS

No formation data is available





B.P.

La Plata County, CO NAD83

Luchini Pad

Luchini 36-06-12 2

Lateral 1

Plan: Plan #1

Standard Planning Report

09 October, 2017





Database:	Grand Junction District	Local Co-ordinate Reference:	Well Luchini 36-06-12 2
Company:	B.P.	TVD Reference:	GL 6266' & RKB 11' @ 6277.00usft (Aztec 507)
Project:	La Plata County, CO NAD83	MD Reference:	GL 6266' & RKB 11' @ 6277.00usft (Aztec 507)
Site:	Luchini Pad	North Reference:	Grid
Well:	Luchini 36-06-12 2	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	Luchini Pad				
Site Position:		Northing:	1,139,289.65 usft	Latitude:	37.0330501
From:	Map	Easting:	2,433,719.01 usft	Longitude:	-107.4400002
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	-1.19

Well	Luchini 36-06-12 2					
Well Position	+N/-S	17.32 usft	Northing:	1,139,306.97 usft	Latitude:	37.0330995
	+E/-W	31.93 usft	Easting:	2,433,750.94 usft	Longitude:	-107.4398920
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,266.00 usft

Wellbore	Lateral 1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	3/24/2017	9.17	63.60	50,139

Design	Plan #1				
Audit Notes:					
Version:	Phase:	PLAN		Tie On Depth:	3,961.53
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	253.61	

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
3,961.53	65.00	270.00	2,798.08	-1,452.95	-1,735.92	0.00	0.00	0.00	0.00	
4,087.99	90.21	267.92	2,825.00	-1,455.28	-1,858.40	20.00	19.94	-1.64	-4.87	
7,612.54	90.21	267.92	2,812.00	-1,583.04	-5,380.62	0.00	0.00	0.00	0.00	Luchini Lat 1 PBHL



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Project:	La Plata County, CO NAD83	MD Reference:	GL 6266' & RKB 11' @ 6277.00usft (Aztec 507)
Site:	Luchini Pad	North Reference:	Grid
Well:	Luchini 36-06-12 2	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)
3,961.53	65.00	270.00	2,798.08	-1,452.95	-1,735.92	2,075.43	0.00	0.00	0.00
4,000.00	72.67	269.32	2,811.96	-1,453.17	-1,771.77	2,109.88	20.00	19.93	-1.77
4,087.99	90.21	267.92	2,825.00	-1,455.28	-1,858.40	2,193.60	20.00	19.94	-1.59
4,100.00	90.21	267.92	2,824.96	-1,455.72	-1,870.41	2,205.24	0.00	0.00	0.00
4,200.00	90.21	267.92	2,824.59	-1,459.34	-1,970.34	2,302.13	0.00	0.00	0.00
4,300.00	90.21	267.92	2,824.22	-1,462.97	-2,070.28	2,399.02	0.00	0.00	0.00
4,400.00	90.21	267.92	2,823.85	-1,466.59	-2,170.21	2,495.92	0.00	0.00	0.00
4,500.00	90.21	267.92	2,823.48	-1,470.22	-2,270.14	2,592.81	0.00	0.00	0.00
4,600.00	90.21	267.92	2,823.11	-1,473.84	-2,370.08	2,689.70	0.00	0.00	0.00
4,700.00	90.21	267.92	2,822.75	-1,477.47	-2,470.01	2,786.60	0.00	0.00	0.00
4,800.00	90.21	267.92	2,822.38	-1,481.09	-2,569.95	2,883.49	0.00	0.00	0.00
4,900.00	90.21	267.92	2,822.01	-1,484.71	-2,669.88	2,980.38	0.00	0.00	0.00
5,000.00	90.21	267.92	2,821.64	-1,488.34	-2,769.81	3,077.28	0.00	0.00	0.00
5,100.00	90.21	267.92	2,821.27	-1,491.96	-2,869.75	3,174.17	0.00	0.00	0.00
5,200.00	90.21	267.92	2,820.90	-1,495.59	-2,969.68	3,271.06	0.00	0.00	0.00
5,300.00	90.21	267.92	2,820.53	-1,499.21	-3,069.61	3,367.96	0.00	0.00	0.00
5,400.00	90.21	267.92	2,820.16	-1,502.84	-3,169.55	3,464.85	0.00	0.00	0.00
5,500.00	90.21	267.92	2,819.79	-1,506.46	-3,269.48	3,561.75	0.00	0.00	0.00
5,600.00	90.21	267.92	2,819.42	-1,510.09	-3,369.41	3,658.64	0.00	0.00	0.00
5,700.00	90.21	267.92	2,819.06	-1,513.71	-3,469.35	3,755.53	0.00	0.00	0.00
5,800.00	90.21	267.92	2,818.69	-1,517.34	-3,569.28	3,852.43	0.00	0.00	0.00
5,900.00	90.21	267.92	2,818.32	-1,520.96	-3,669.21	3,949.32	0.00	0.00	0.00
6,000.00	90.21	267.92	2,817.95	-1,524.59	-3,769.15	4,046.21	0.00	0.00	0.00
6,100.00	90.21	267.92	2,817.58	-1,528.21	-3,869.08	4,143.11	0.00	0.00	0.00
6,200.00	90.21	267.92	2,817.21	-1,531.84	-3,969.02	4,240.00	0.00	0.00	0.00
6,300.00	90.21	267.92	2,816.84	-1,535.46	-4,068.95	4,336.89	0.00	0.00	0.00
6,400.00	90.21	267.92	2,816.47	-1,539.09	-4,168.88	4,433.79	0.00	0.00	0.00
6,500.00	90.21	267.92	2,816.10	-1,542.71	-4,268.82	4,530.68	0.00	0.00	0.00
6,600.00	90.21	267.92	2,815.74	-1,546.34	-4,368.75	4,627.57	0.00	0.00	0.00
6,700.00	90.21	267.92	2,815.37	-1,549.96	-4,468.68	4,724.47	0.00	0.00	0.00
6,800.00	90.21	267.92	2,815.00	-1,553.59	-4,568.62	4,821.36	0.00	0.00	0.00
6,900.00	90.21	267.92	2,814.63	-1,557.21	-4,668.55	4,918.25	0.00	0.00	0.00
7,000.00	90.21	267.92	2,814.26	-1,560.84	-4,768.48	5,015.15	0.00	0.00	0.00
7,100.00	90.21	267.92	2,813.89	-1,564.46	-4,868.42	5,112.04	0.00	0.00	0.00
7,200.00	90.21	267.92	2,813.52	-1,568.09	-4,968.35	5,208.94	0.00	0.00	0.00
7,300.00	90.21	267.92	2,813.15	-1,571.71	-5,068.29	5,305.83	0.00	0.00	0.00
7,400.00	90.21	267.92	2,812.78	-1,575.34	-5,168.22	5,402.72	0.00	0.00	0.00
7,500.00	90.21	267.92	2,812.42	-1,578.96	-5,268.15	5,499.62	0.00	0.00	0.00
7,574.84	90.21	267.92	2,812.14	-1,581.67	-5,342.94	5,572.13	0.00	0.00	0.00
Luchini Lat 1 ST1 PBHL									
7,600.00	90.21	267.92	2,812.05	-1,582.59	-5,368.09	5,596.51	0.00	0.00	0.00
7,612.54	90.21	267.92	2,812.00	-1,583.04	-5,380.62	5,608.66	0.00	0.00	0.00
Luchini Lat 1 PBHL									



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Site:	Luchini Pad	North Reference:	Grid
Well:	Luchini 36-06-12 2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 1		
Design:	Plan #1		

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
Luchini Lat 1 PBHL - plan hits target center - Point	0.00	0.00	2,812.00	-1,583.04	-5,380.62	1,137,723.93	2,428,370.32	37.0284445	-107.4582062
Luchini Lat 1 ST1 PBHL - plan misses target center by 562.71usft at 7574.84usft MD (2812.14 TVD, -1581.67 N, -5342.94 E) - Point	0.00	0.00	2,824.00	-1,019.46	-5,363.38	1,138,287.51	2,428,387.56	37.0299930	-107.4581877