



Company: B.P.
Project: La Plata County, CO NAD83
Site: UTE AD Pad
Well: UTE AD 2
Wellbore: Lateral 1 ST1
Design: Plan #6

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: 1.30°
Magnetic North: 10.47°

Magnetic Field
Strength: 50143.1snT
Dip Angle: 63.67°
Date: 4/12/2017
Model: HDGM

WELL DETAILS: UTE AD 2

GL 6498' & RKB 11' @ 6509.00usft (Aztec 507)
+N/-S +E/-W Northing Easting Latitude Longitude
0.00 0.00 1173209.41 2380138.20 37.1229822 -107.6261445

Plan: Plan #6 (UTE AD 2/Lateral 1 ST1)

Created By: Janie Collins Date: 16:20, October 16 2017

DESIGN TARGET DETAILS

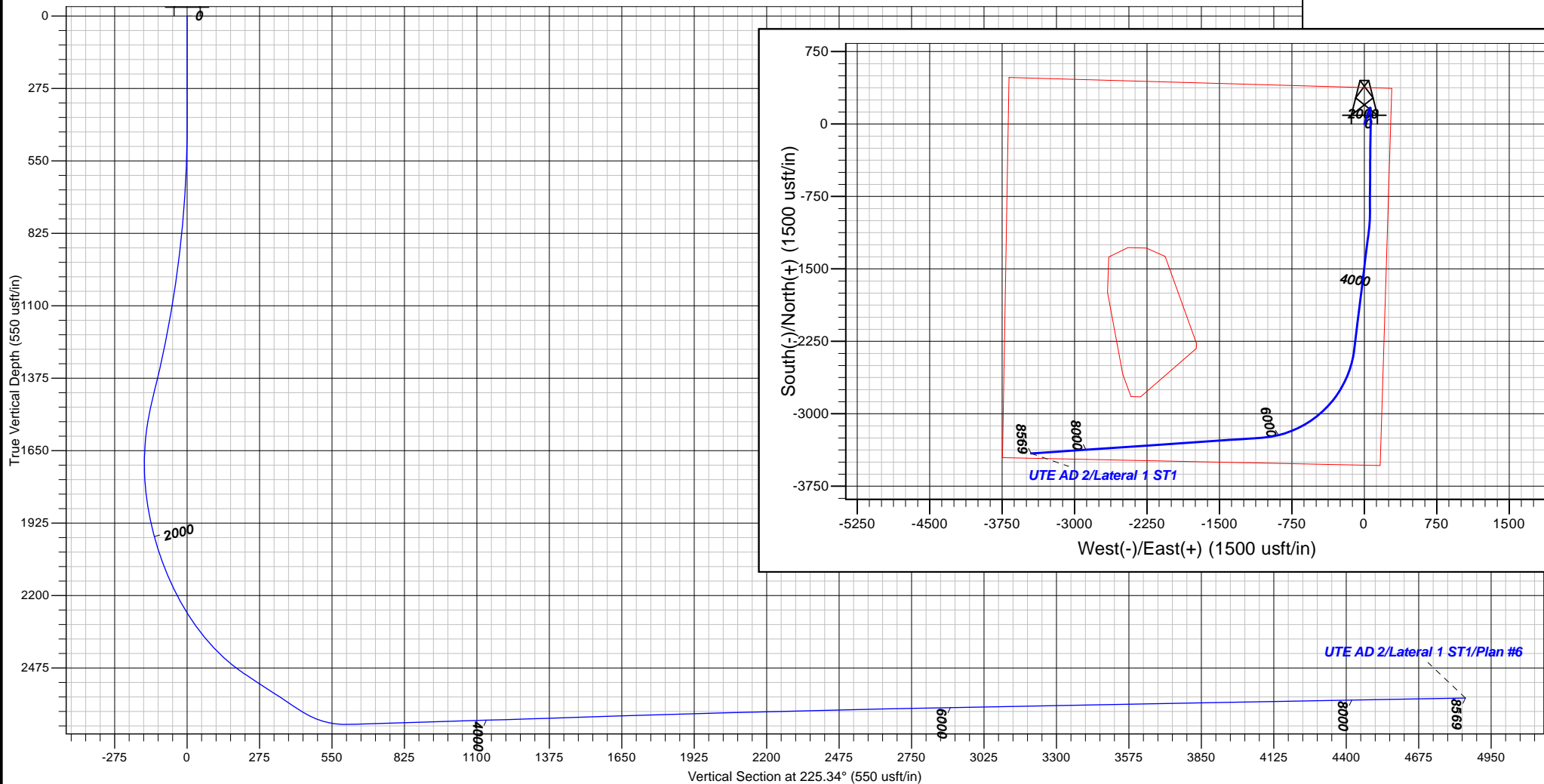
Name TVD +N/-S +E/-W Northing Easting
UTE AD 2 Lat 1 ST1 PBHL (copy) 2589.00 -3410.25 -3450.91 1169799.16 2376687.29

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
3363.00	90.87	179.83	2688.24	-967.17	57.39	0.00	0.00	639.00	
3442.88	91.40	187.00	2686.66	-1046.84	52.64	9.00	85.71	698.38	
4742.88	91.40	187.00	2654.90	-2336.76	-105.74	0.00	0.00	1717.73	
6181.13	90.79	266.12	2621.99	-3248.65	-1068.83	5.50	89.46	3043.73	
8568.91	90.79	266.12	2589.00	-3410.25	-3450.91	0.00	0.00	4851.66	UTE AD 2 Lat 1 ST1 PBHL (copy)

FORMATION TOP DETAILS

No formation data is available





B.P.

La Plata County, CO NAD83

UTE AD Pad

UTE AD 2

Lateral 1 ST1

Plan: Plan #6

Standard Planning Report

16 October, 2017





Database:	Grand Junction District	Local Co-ordinate Reference:	Well UTE AD 2
Company:	B.P.	TVD Reference:	GL 6498' & RKB 11' @ 6509.00usft (Aztec 507)
Project:	La Plata County, CO NAD83	MD Reference:	GL 6498' & RKB 11' @ 6509.00usft (Aztec 507)
Site:	UTE AD Pad	North Reference:	Grid
Well:	UTE AD 2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 1 ST1		
Design:	Plan #6		

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		UTE AD Pad			
Site Position:		Northing:	1,173,239.40 usft	Latitude:	37.1230645
From:	Map	Easting:	2,380,138.86 usft	Longitude:	-107.6261446
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	-1.30 °

Well	UTE AD 2					
Well Position	+N/-S	-29.99 usft	Northing:	1,173,209.41 usft	Latitude:	37.1229822
	+E/-W	-0.66 usft	Easting:	2,380,138.20 usft	Longitude:	-107.6261445
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,498.00 usft

Wellbore	Lateral 1 ST1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	4/12/2017	9.17	63.67	50,143

Design	Plan #6				
Audit Notes:					
Version:	Phase:	PLAN		Tie On Depth:	3,363.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	225.34	

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
3,363.00	90.87	179.83	2,688.25	-967.17	57.39	0.00	0.00	0.00	0.00	
3,442.88	91.40	187.00	2,686.66	-1,046.84	52.64	9.00	0.66	8.98	85.71	
4,742.88	91.40	187.00	2,654.90	-2,336.76	-105.74	0.00	0.00	0.00	0.00	
6,181.13	90.79	266.12	2,621.99	-3,248.65	-1,068.83	5.50	-0.04	5.50	89.46	
8,568.91	90.79	266.12	2,589.00	-3,410.25	-3,450.91	0.00	0.00	0.00	0.00	UTE AD 2 Lat 1 ST1 f



Database:	Grand Junction District	Local Co-ordinate Reference:	Well UTE AD 2
Company:	B.P.	TVD Reference:	GL 6498' & RKB 11' @ 6509.00usft (Aztec 507)
Project:	La Plata County, CO NAD83	MD Reference:	GL 6498' & RKB 11' @ 6509.00usft (Aztec 507)
Site:	UTE AD Pad	North Reference:	Grid
Well:	UTE AD 2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 1 ST1		
Design:	Plan #6		

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)
3,363.00	90.87	179.83	2,688.25	-967.17	57.39	639.00	0.00	0.00	0.00
3,400.00	91.12	183.15	2,687.60	-1,004.14	56.43	665.68	9.00	0.67	8.98
3,442.88	91.40	187.00	2,686.66	-1,046.84	52.64	698.38	9.00	0.66	8.98
3,500.00	91.40	187.00	2,685.26	-1,103.51	45.68	743.17	0.00	0.00	0.00
3,600.00	91.40	187.00	2,682.82	-1,202.74	33.50	821.58	0.00	0.00	0.00
3,700.00	91.40	187.00	2,680.38	-1,301.96	21.32	899.99	0.00	0.00	0.00
3,800.00	91.40	187.00	2,677.93	-1,401.19	9.13	978.41	0.00	0.00	0.00
3,900.00	91.40	187.00	2,675.49	-1,500.41	-3.05	1,056.82	0.00	0.00	0.00
4,000.00	91.40	187.00	2,673.05	-1,599.64	-15.23	1,135.23	0.00	0.00	0.00
4,100.00	91.40	187.00	2,670.61	-1,698.86	-27.42	1,213.64	0.00	0.00	0.00
4,200.00	91.40	187.00	2,668.16	-1,798.09	-39.60	1,292.05	0.00	0.00	0.00
4,300.00	91.40	187.00	2,665.72	-1,897.31	-51.78	1,370.46	0.00	0.00	0.00
4,400.00	91.40	187.00	2,663.28	-1,996.54	-63.97	1,448.87	0.00	0.00	0.00
4,500.00	91.40	187.00	2,660.83	-2,095.76	-76.15	1,527.29	0.00	0.00	0.00
4,600.00	91.40	187.00	2,658.39	-2,194.99	-88.33	1,605.70	0.00	0.00	0.00
4,700.00	91.40	187.00	2,655.95	-2,294.21	-100.52	1,684.11	0.00	0.00	0.00
4,742.88	91.40	187.00	2,654.90	-2,336.76	-105.74	1,717.73	0.00	0.00	0.00
4,800.00	91.43	190.14	2,653.49	-2,393.22	-114.25	1,763.47	5.50	0.05	5.50
4,900.00	91.46	195.64	2,650.96	-2,490.63	-136.55	1,847.80	5.50	0.04	5.50
5,000.00	91.49	201.15	2,648.38	-2,585.45	-168.08	1,936.88	5.50	0.02	5.50
5,100.00	91.50	206.65	2,645.78	-2,676.81	-208.56	2,029.89	5.50	0.01	5.50
5,200.00	91.50	212.15	2,643.16	-2,763.87	-257.61	2,125.97	5.50	0.00	5.50
5,300.00	91.48	217.65	2,640.56	-2,845.83	-314.79	2,224.25	5.50	-0.02	5.50
5,400.00	91.45	223.15	2,638.01	-2,921.93	-379.56	2,323.81	5.50	-0.03	5.50
5,500.00	91.40	228.65	2,635.52	-2,991.46	-451.32	2,423.73	5.50	-0.04	5.50
5,600.00	91.35	234.16	2,633.12	-3,053.80	-529.43	2,523.10	5.50	-0.06	5.50
5,700.00	91.28	239.66	2,630.83	-3,108.37	-613.15	2,621.01	5.50	-0.07	5.50
5,800.00	91.19	245.16	2,628.67	-3,154.66	-701.72	2,716.55	5.50	-0.08	5.50
5,900.00	91.10	250.66	2,626.67	-3,192.25	-794.33	2,808.84	5.50	-0.09	5.50
6,000.00	91.00	256.16	2,624.83	-3,220.79	-890.11	2,897.03	5.50	-0.10	5.50
6,100.00	90.89	261.66	2,623.18	-3,240.02	-988.19	2,980.31	5.50	-0.11	5.50
6,181.13	90.79	266.12	2,621.99	-3,248.65	-1,068.83	3,043.73	5.50	-0.12	5.50
6,200.00	90.79	266.12	2,621.73	-3,249.93	-1,087.66	3,058.02	0.00	0.00	0.00
6,249.81	90.79	266.12	2,621.04	-3,253.30	-1,137.35	3,095.74	0.00	0.00	0.00
UTE AD 2 Lat 1 ST1 T1 (copy)									
6,300.00	90.79	266.12	2,620.35	-3,256.69	-1,187.42	3,133.74	0.00	0.00	0.00
6,380.19	90.79	266.12	2,619.24	-3,262.12	-1,267.42	3,194.45	0.00	0.00	0.00
UTE AD 2 Lat 1 ST1 T2 (copy)									
6,400.00	90.79	266.12	2,618.97	-3,263.46	-1,287.18	3,209.45	0.00	0.00	0.00
6,493.08	90.79	266.12	2,617.68	-3,269.76	-1,380.04	3,279.93	0.00	0.00	0.00
UTE AD 2 Lat 1 ST1 T3 (copy)									
6,500.00	90.79	266.12	2,617.59	-3,270.23	-1,386.94	3,285.17	0.00	0.00	0.00
6,600.00	90.79	266.12	2,616.20	-3,277.00	-1,486.70	3,360.88	0.00	0.00	0.00
6,700.00	90.79	266.12	2,614.82	-3,283.77	-1,586.46	3,436.60	0.00	0.00	0.00
6,703.39	90.79	266.12	2,614.78	-3,284.00	-1,589.85	3,439.17	0.00	0.00	0.00
UTE AD 2 Lat 1 ST1 T4 (copy)									
6,800.00	90.79	266.12	2,613.44	-3,290.53	-1,686.22	3,512.31	0.00	0.00	0.00
6,900.00	90.79	266.12	2,612.06	-3,297.30	-1,785.98	3,588.03	0.00	0.00	0.00
7,000.00	90.79	266.12	2,610.68	-3,304.07	-1,885.75	3,663.75	0.00	0.00	0.00
7,061.04	90.79	266.12	2,609.83	-3,308.20	-1,946.64	3,709.96	0.00	0.00	0.00
UTE AD 2 Lat 1 ST1 T5 (copy)									



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Site:	UTE AD Pad	North Reference:	Grid
Well:	UTE AD 2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 1 ST1		
Design:	Plan #6		

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)
7,100.00	90.79	266.12	2,609.30	-3,310.84	-1,985.51	3,739.46	0.00	0.00	0.00
7,200.00	90.79	266.12	2,607.91	-3,317.61	-2,085.27	3,815.18	0.00	0.00	0.00
7,300.00	90.79	266.12	2,606.53	-3,324.37	-2,185.03	3,890.89	0.00	0.00	0.00
7,400.00	90.79	266.12	2,605.15	-3,331.14	-2,284.79	3,966.61	0.00	0.00	0.00
7,500.00	90.79	266.12	2,603.77	-3,337.91	-2,384.55	4,042.32	0.00	0.00	0.00
7,529.29	90.79	266.12	2,603.36	-3,339.89	-2,413.77	4,064.50	0.00	0.00	0.00
UTE AD 2 Lat 1 ST1 T6 (copy)									
7,600.00	90.79	266.12	2,602.39	-3,344.68	-2,484.31	4,118.04	0.00	0.00	0.00
7,700.00	90.79	266.12	2,601.01	-3,351.44	-2,584.07	4,193.76	0.00	0.00	0.00
7,800.00	90.79	266.12	2,599.62	-3,358.21	-2,683.84	4,269.47	0.00	0.00	0.00
7,900.00	90.79	266.12	2,598.24	-3,364.98	-2,783.60	4,345.19	0.00	0.00	0.00
8,000.00	90.79	266.12	2,596.86	-3,371.75	-2,883.36	4,420.90	0.00	0.00	0.00
8,100.00	90.79	266.12	2,595.48	-3,378.52	-2,983.12	4,496.62	0.00	0.00	0.00
8,200.00	90.79	266.12	2,594.10	-3,385.28	-3,082.88	4,572.33	0.00	0.00	0.00
8,300.00	90.79	266.12	2,592.72	-3,392.05	-3,182.64	4,648.05	0.00	0.00	0.00
8,400.00	90.79	266.12	2,591.33	-3,398.82	-3,282.40	4,723.77	0.00	0.00	0.00
8,500.00	90.79	266.12	2,589.95	-3,405.59	-3,382.16	4,799.48	0.00	0.00	0.00
8,568.91	90.79	266.12	2,589.00	-3,410.25	-3,450.91	4,851.66	0.00	0.00	0.00
UTE AD 2 Lat 1 ST1 PBHL (copy)									

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
UTE AD 2 Lat 1 ST1 PB - plan hits target center - Point	0.00	360.00	2,589.00	-3,410.25	-3,450.91	1,169,799.16	2,376,687.29	37.1134024	-107.6377095