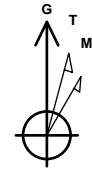




Company: B.P.
Project: La Plata County, CO NAD83
Site: UTE AD Pad
Well: UTE AD 2
Wellbore: Lateral 2
Design: Plan #6

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 2)

Created By: Janie Collins Date: 16:28, October 16 2017

DESIGN TARGET DETAILS

Name TVD +N/-S +E/-W Northing Easting
UTE AD 2 Lat 2 PBHL (copy) 2459.00 -3212.63 -3490.28 1169996.78 2376647.92

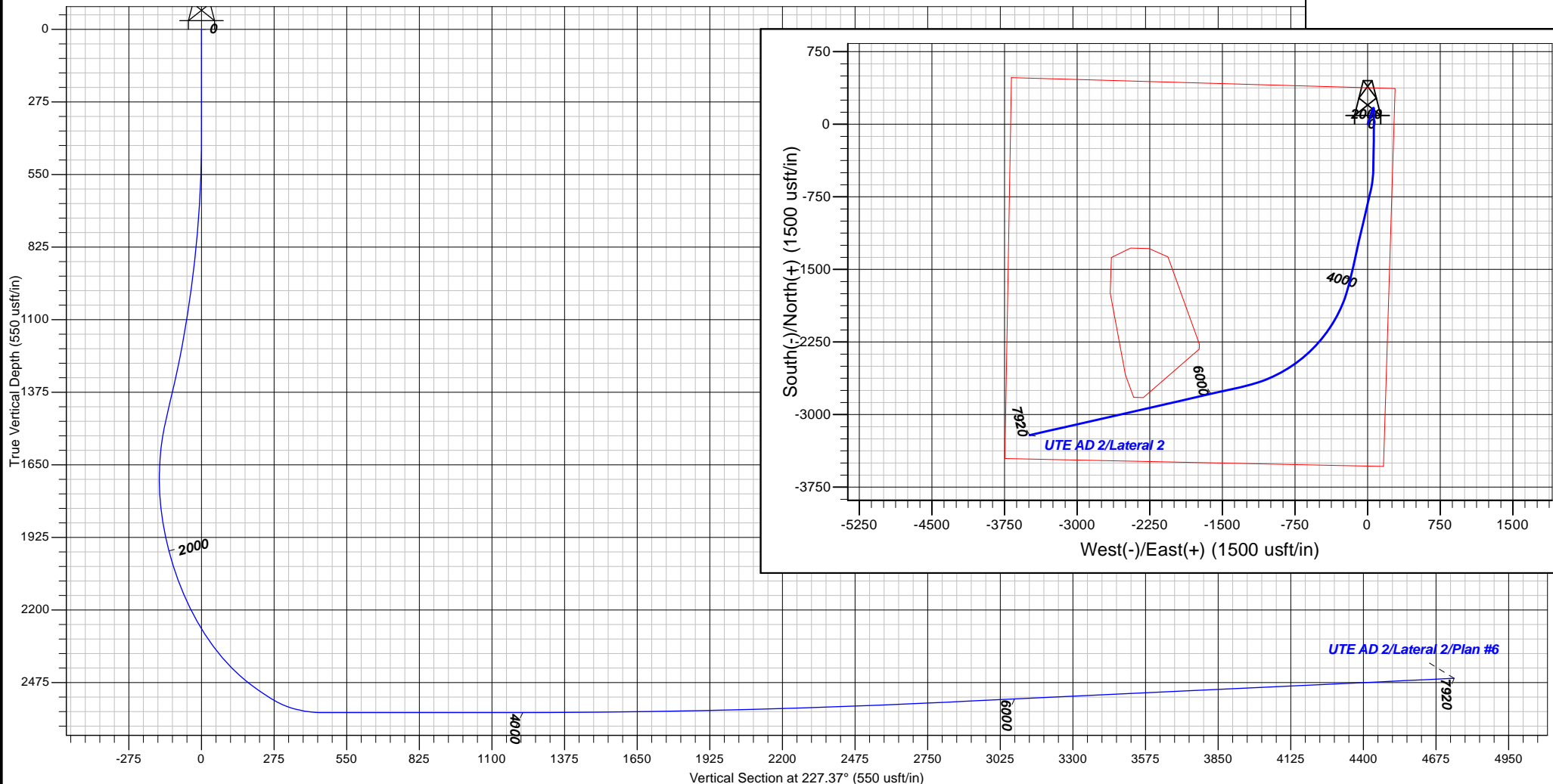
SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
2802.50	65.00	180.50	2528.89	-438.15	59.88	0.00	0.00	252.67	
3080.20	90.00	193.00	2588.75	-704.51	26.90	10.00	27.68	457.33	
4030.20	90.00	193.00	2588.75	-1630.16	-186.80	0.00	0.00	1241.45	
5634.57	92.34	257.15	2552.15	-2704.79	-1263.71	4.00	87.40	2761.58	
7920.22	92.34	257.15	2459.00	-3212.63	-3490.28	0.00	0.00	4743.74	

UTE AD 2 Lat 2 PBHL (copy)

FORMATION TOP DETAILS

No formation data is available





B.P.

La Plata County, CO NAD83

UTE AD Pad

UTE AD 2

Lateral 2

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 2		
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 2				
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:	2,802.50
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	227.37	

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
2,802.50	65.00	180.50	2,528.89	-438.15	59.88	0.00	0.00	0.00	0.00	
3,080.20	90.00	193.00	2,588.75	-704.51	26.90	10.00	9.00	4.50	27.68	
4,030.20	90.00	193.00	2,588.75	-1,630.16	-186.80	0.00	0.00	0.00	0.00	
5,634.57	92.34	257.15	2,552.15	-2,704.79	-1,263.71	4.00	0.15	4.00	87.40	
7,920.22	92.34	257.15	2,459.00	-3,212.63	-3,490.28	0.00	0.00	0.00	0.00	UTE AD 2 Lat 2 PBHL



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 2		
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)
2,802.50	65.00	180.50	2,528.89	-438.15	59.88	252.67	0.00	0.00	0.00
2,900.00	73.70	185.20	2,563.26	-529.15	55.25	317.71	10.00	8.93	4.82
3,000.00	82.73	189.61	2,583.67	-626.09	42.59	392.68	10.00	9.03	4.40
3,080.20	90.00	193.00	2,588.75	-704.51	26.90	457.33	10.00	9.07	4.23
3,100.00	90.00	193.00	2,588.75	-723.80	22.45	473.67	0.00	0.00	0.00
3,200.00	90.00	193.00	2,588.75	-821.24	-0.05	556.21	0.00	0.00	0.00
3,300.00	90.00	193.00	2,588.75	-918.68	-22.54	638.75	0.00	0.00	0.00
3,400.00	90.00	193.00	2,588.75	-1,016.11	-45.04	721.28	0.00	0.00	0.00
3,500.00	90.00	193.00	2,588.75	-1,113.55	-67.53	803.82	0.00	0.00	0.00
3,600.00	90.00	193.00	2,588.75	-1,210.99	-90.03	886.36	0.00	0.00	0.00
3,700.00	90.00	193.00	2,588.75	-1,308.42	-112.52	968.90	0.00	0.00	0.00
3,800.00	90.00	193.00	2,588.75	-1,405.86	-135.02	1,051.44	0.00	0.00	0.00
3,900.00	90.00	193.00	2,588.75	-1,503.30	-157.51	1,133.98	0.00	0.00	0.00
4,000.00	90.00	193.00	2,588.75	-1,600.74	-180.01	1,216.52	0.00	0.00	0.00
4,030.20	90.00	193.00	2,588.75	-1,630.16	-186.80	1,241.45	0.00	0.00	0.00
4,100.00	90.13	195.79	2,588.67	-1,697.76	-204.15	1,299.99	4.00	0.18	4.00
4,200.00	90.31	199.79	2,588.30	-1,792.96	-234.69	1,386.94	4.00	0.18	4.00
4,300.00	90.49	203.78	2,587.60	-1,885.80	-271.79	1,477.11	4.00	0.18	4.00
4,400.00	90.66	207.78	2,586.60	-1,975.83	-315.27	1,570.07	4.00	0.18	4.00
4,500.00	90.84	211.77	2,585.29	-2,062.60	-364.92	1,665.36	4.00	0.17	4.00
4,600.00	91.00	215.77	2,583.69	-2,145.70	-420.49	1,762.53	4.00	0.17	4.00
4,700.00	91.17	219.77	2,581.79	-2,224.71	-481.71	1,861.09	4.00	0.16	4.00
4,800.00	91.33	223.77	2,579.61	-2,299.27	-548.30	1,960.56	4.00	0.16	4.00
4,900.00	91.48	227.76	2,577.16	-2,368.99	-619.91	2,060.47	4.00	0.15	4.00
5,000.00	91.63	231.76	2,574.45	-2,433.55	-696.20	2,160.33	4.00	0.15	4.00
5,100.00	91.76	235.76	2,571.49	-2,492.62	-776.81	2,259.65	4.00	0.14	4.00
5,200.00	91.89	239.76	2,568.30	-2,545.93	-861.33	2,357.94	4.00	0.13	4.00
5,300.00	92.01	243.76	2,564.89	-2,593.20	-949.36	2,454.72	4.00	0.12	4.00
5,400.00	92.12	247.76	2,561.29	-2,634.22	-1,040.47	2,549.53	4.00	0.11	4.00
5,500.00	92.22	251.77	2,557.50	-2,668.77	-1,134.21	2,641.91	4.00	0.10	4.00
5,541.67	92.26	253.43	2,555.87	-2,681.23	-1,173.95	2,679.58	4.00	0.09	4.00
UTE AD 2 Lat 2 T1 (copy)									
5,600.00	92.31	255.77	2,553.55	-2,696.70	-1,230.13	2,731.39	4.00	0.09	4.00
5,634.57	92.34	257.15	2,552.15	-2,704.79	-1,263.71	2,761.58	4.00	0.08	4.00
5,700.00	92.34	257.15	2,549.48	-2,719.33	-1,327.45	2,818.32	0.00	0.00	0.00
5,749.11	92.34	257.15	2,547.48	-2,730.24	-1,375.29	2,860.91	0.00	0.00	0.00
UTE AD 2 Lat 2 T2 (copy)									
5,800.00	92.34	257.15	2,545.41	-2,741.55	-1,424.87	2,905.04	0.00	0.00	0.00
5,900.00	92.34	257.15	2,541.33	-2,763.76	-1,522.28	2,991.76	0.00	0.00	0.00
5,902.02	92.34	257.15	2,541.25	-2,764.21	-1,524.25	2,993.52	0.00	0.00	0.00
UTE AD 2 Lat 2 T3 (copy)									
6,000.00	92.34	257.15	2,537.26	-2,785.98	-1,619.70	3,078.49	0.00	0.00	0.00
6,100.00	92.34	257.15	2,533.18	-2,808.20	-1,717.11	3,165.21	0.00	0.00	0.00
6,159.51	92.34	257.15	2,530.76	-2,821.42	-1,775.08	3,216.81	0.00	0.00	0.00
UTE AD 2 Lat 2 T4 (copy)									
6,200.00	92.34	257.15	2,529.11	-2,830.42	-1,814.53	3,251.93	0.00	0.00	0.00
6,300.00	92.34	257.15	2,525.03	-2,852.64	-1,911.94	3,338.65	0.00	0.00	0.00
6,400.00	92.34	257.15	2,520.96	-2,874.86	-2,009.36	3,425.38	0.00	0.00	0.00
6,483.18	92.34	257.15	2,517.57	-2,893.34	-2,090.39	3,497.51	0.00	0.00	0.00
UTE AD 2 Lat 2 T5 (copy)									
6,500.00	92.34	257.15	2,516.88	-2,897.08	-2,106.77	3,512.10	0.00	0.00	0.00



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 2		
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)
6,600.00	92.34	257.15	2,512.80	-2,919.30	-2,204.19	3,598.82	0.00	0.00	0.00
6,700.00	92.34	257.15	2,508.73	-2,941.51	-2,301.61	3,685.54	0.00	0.00	0.00
6,800.00	92.34	257.15	2,504.65	-2,963.73	-2,399.02	3,772.26	0.00	0.00	0.00
6,868.17	92.34	257.15	2,501.88	-2,978.88	-2,465.43	3,831.38	0.00	0.00	0.00
UTE AD 2 Lat 2 T6 (copy)									
6,900.00	92.34	257.15	2,500.58	-2,985.95	-2,496.44	3,858.99	0.00	0.00	0.00
7,000.00	92.34	257.15	2,496.50	-3,008.17	-2,593.85	3,945.71	0.00	0.00	0.00
7,100.00	92.34	257.15	2,492.43	-3,030.39	-2,691.27	4,032.43	0.00	0.00	0.00
7,200.00	92.34	257.15	2,488.35	-3,052.61	-2,788.68	4,119.15	0.00	0.00	0.00
7,300.00	92.34	257.15	2,484.28	-3,074.83	-2,886.10	4,205.87	0.00	0.00	0.00
7,400.00	92.34	257.15	2,480.20	-3,097.04	-2,983.51	4,292.60	0.00	0.00	0.00
7,500.00	92.34	257.15	2,476.13	-3,119.26	-3,080.93	4,379.32	0.00	0.00	0.00
7,600.00	92.34	257.15	2,472.05	-3,141.48	-3,178.34	4,466.04	0.00	0.00	0.00
7,700.00	92.34	257.15	2,467.97	-3,163.70	-3,275.76	4,552.76	0.00	0.00	0.00
7,800.00	92.34	257.15	2,463.90	-3,185.92	-3,373.17	4,639.48	0.00	0.00	0.00
7,900.00	92.34	257.15	2,459.82	-3,208.14	-3,470.59	4,726.21	0.00	0.00	0.00
7,920.22	92.34	257.15	2,459.00	-3,212.63	-3,490.28	4,743.74	0.00	0.00	0.00
UTE AD 2 Lat 2 PBHL (copy)									

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									
UTE AD 2 Lat 2 PBHL (c	0.00	360.00	2,459.00	-3,212.63	-3,490.28	1,169,996.78	2,376,647.92	37.1139426	-107.6378599
- plan hits target center									
- Point									