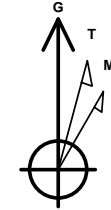




Company: B.P.
Project: La Plata County, CO NAD83
Site: UTE Pad
Well: UTE AB 2
Wellbore: Lateral 1
Design: Plan #1

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: 1.29°
Magnetic North: 10.60°

Magnetic Field
Strength: 50287.7snT
Dip Angle: 63.67°
Date: 10/28/2015
Model: HDGM

WELL DETAILS: UTE AB 2

GL 6443.33' & RKB 11' @ 6454.33usft (Aztec 507)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1164749.28	2384281.72	37.1000115	-107.6112812

Plan: Plan #1 (UTE AB 2/Lateral 1)

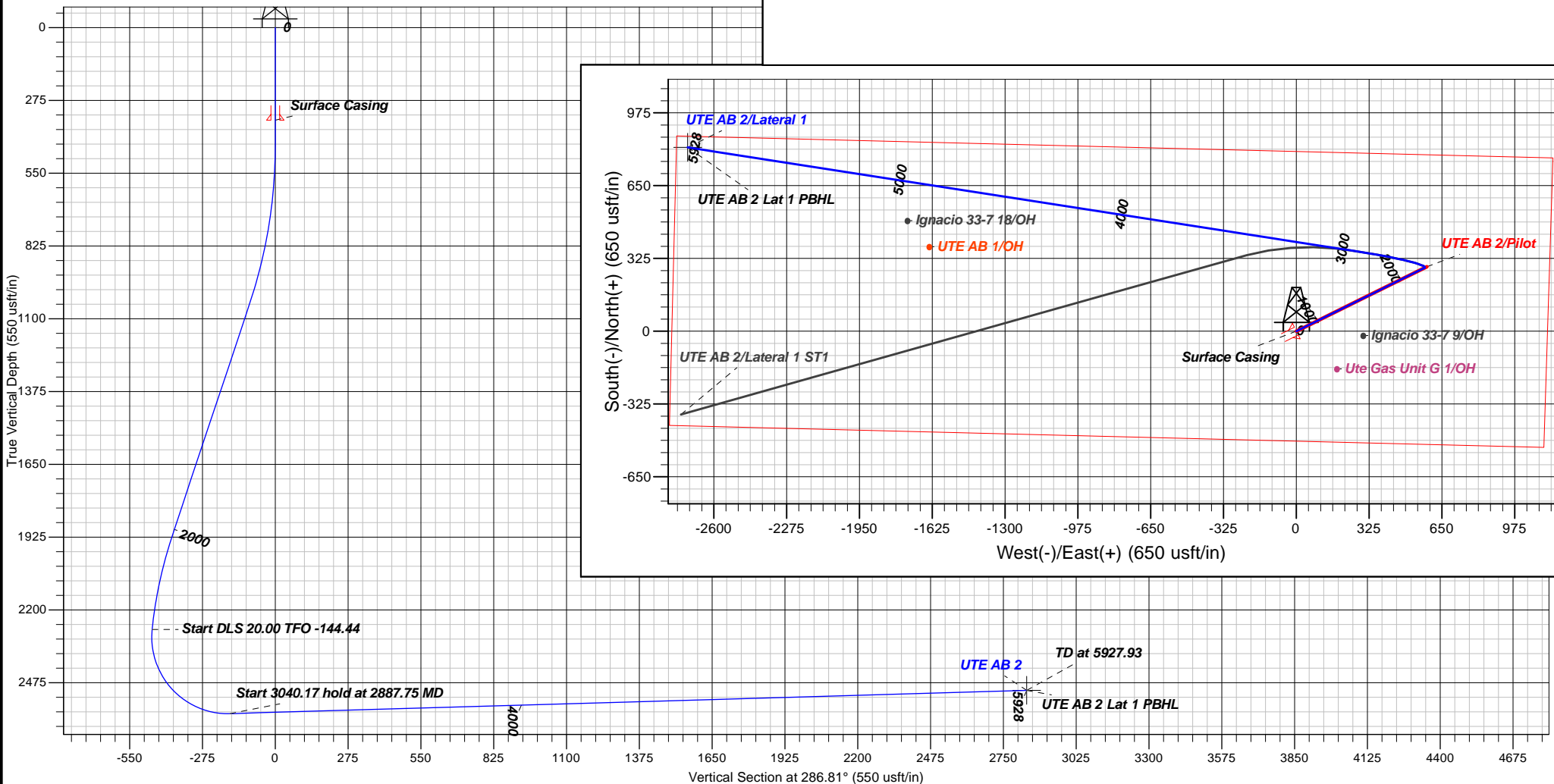
Created By: Janie Collins Date: 14:58, October 28 2015

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
UTE AB 2 Lat 1 PBHL	2504.00	820.97	-2716.77	1165570.25	2381564.95	37.1020966	-107.6206576

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target	Annotation
2396.45	8.09	63.68	2273.81	282.53	571.28	0.00	0.00	-465.14		
2887.75	91.66	278.84	2592.00	354.04	286.04	20.00	-144.44	-171.41		
5927.93	91.66	278.84	2504.00	820.97	-2716.77	0.00	0.00	2838.10	UTE AB 2 Lat 1 PBHL	





B.P.

La Plata County, CO NAD83

UTE Pad

UTE AB 2

Lateral 1

Plan: Plan #1

Standard Planning Report

28 October, 2015





Database:	Grand Junction District	Local Co-ordinate Reference:	Well UTE AB 2
Company:	B.P.	TVD Reference:	GL 6443.33' & RKB 11' @ 6454.33usft (Aztec 507)
Project:	La Plata County, CO NAD83	MD Reference:	GL 6443.33' & RKB 11' @ 6454.33usft (Aztec 507)
Site:	UTE Pad	North Reference:	Grid
Well:	UTE AB 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		UTE Pad			
Site Position:		Northing:	1,164,749.28 usft	Latitude:	37.1000114
From:	Map	Easting:	2,384,281.72 usft	Longitude:	-107.6112812
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	-1.30 °

Well	UTE AB 2					
Well Position	+N/-S	0.00 usft	Northing:	1,164,749.28 usft	Latitude:	37.1000114
	+E/-W	0.00 usft	Easting:	2,384,281.72 usft	Longitude:	-107.6112812
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,443.33 usft

Wellbore	Lateral 1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	10/28/2015	9.30	63.67	50,288

Design	Plan #1				
Audit Notes:					
Version:	Phase:	PLAN		Tie On Depth:	2,396.45
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	286.81	

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
2,396.45	8.09	63.68	2,273.81	282.53	571.28	0.00	0.00	0.00	0.00	
2,887.75	91.66	278.84	2,592.00	354.04	286.04	20.00	17.01	-29.48	-144.44	
5,927.93	91.66	278.84	2,504.00	820.97	-2,716.77	0.00	0.00	0.00	0.00	UTE AB 2 Lat 1 PBHL



Database:	Grand Junction District	Local Co-ordinate Reference:	Well UTE AB 2
Company:	B.P.	TVD Reference:	GL 6443.33' & RKB 11' @ 6454.33usft (Aztec 507)
Project:	La Plata County, CO NAD83	MD Reference:	GL 6443.33' & RKB 11' @ 6454.33usft (Aztec 507)
Site:	UTE Pad	North Reference:	Grid
Well:	UTE AB 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)
2,396.45	8.09	63.68	2,273.81	282.53	571.28	-465.14	0.00	0.00	0.00
2,400.00	7.52	60.53	2,277.33	282.76	571.71	-465.48	20.00	-15.95	-88.87
2,500.00	14.86	297.01	2,376.23	291.89	565.92	-457.31	20.00	7.33	-123.52
2,600.00	34.40	285.86	2,466.74	305.58	526.93	-416.02	20.00	19.54	-11.14
2,700.00	54.25	282.36	2,537.93	322.16	459.44	-346.62	20.00	19.86	-3.50
2,800.00	74.17	280.31	2,581.22	339.63	371.58	-257.46	20.00	19.92	-2.05
2,887.75	91.66	278.84	2,592.00	354.04	286.04	-171.41	20.00	19.93	-1.68
2,900.00	91.66	278.84	2,591.65	355.92	273.94	-159.29	0.00	0.00	0.00
3,000.00	91.66	278.84	2,588.75	371.28	175.17	-60.30	0.00	0.00	0.00
3,100.00	91.66	278.84	2,585.86	386.64	76.40	38.69	0.00	0.00	0.00
3,200.00	91.66	278.84	2,582.97	401.99	-22.37	137.69	0.00	0.00	0.00
3,300.00	91.66	278.84	2,580.07	417.35	-121.14	236.68	0.00	0.00	0.00
3,400.00	91.66	278.84	2,577.18	432.71	-219.91	335.67	0.00	0.00	0.00
3,500.00	91.66	278.84	2,574.28	448.07	-318.68	434.66	0.00	0.00	0.00
3,600.00	91.66	278.84	2,571.39	463.43	-417.45	533.65	0.00	0.00	0.00
3,700.00	91.66	278.84	2,568.49	478.79	-516.22	632.64	0.00	0.00	0.00
3,800.00	91.66	278.84	2,565.60	494.15	-615.00	731.64	0.00	0.00	0.00
3,900.00	91.66	278.84	2,562.70	509.51	-713.77	830.63	0.00	0.00	0.00
4,000.00	91.66	278.84	2,559.81	524.86	-812.54	929.62	0.00	0.00	0.00
4,100.00	91.66	278.84	2,556.91	540.22	-911.31	1,028.61	0.00	0.00	0.00
4,200.00	91.66	278.84	2,554.02	555.58	-1,010.08	1,127.60	0.00	0.00	0.00
4,300.00	91.66	278.84	2,551.12	570.94	-1,108.85	1,226.59	0.00	0.00	0.00
4,400.00	91.66	278.84	2,548.23	586.30	-1,207.62	1,325.59	0.00	0.00	0.00
4,500.00	91.66	278.84	2,545.33	601.66	-1,306.39	1,424.58	0.00	0.00	0.00
4,600.00	91.66	278.84	2,542.44	617.02	-1,405.16	1,523.57	0.00	0.00	0.00
4,700.00	91.66	278.84	2,539.54	632.38	-1,503.94	1,622.56	0.00	0.00	0.00
4,800.00	91.66	278.84	2,536.65	647.73	-1,602.71	1,721.55	0.00	0.00	0.00
4,900.00	91.66	278.84	2,533.76	663.09	-1,701.48	1,820.54	0.00	0.00	0.00
5,000.00	91.66	278.84	2,530.86	678.45	-1,800.25	1,919.54	0.00	0.00	0.00
5,100.00	91.66	278.84	2,527.97	693.81	-1,899.02	2,018.53	0.00	0.00	0.00
5,200.00	91.66	278.84	2,525.07	709.17	-1,997.79	2,117.52	0.00	0.00	0.00
5,300.00	91.66	278.84	2,522.18	724.53	-2,096.56	2,216.51	0.00	0.00	0.00
5,400.00	91.66	278.84	2,519.28	739.89	-2,195.33	2,315.50	0.00	0.00	0.00
5,500.00	91.66	278.84	2,516.39	755.25	-2,294.10	2,414.49	0.00	0.00	0.00
5,600.00	91.66	278.84	2,513.49	770.60	-2,392.87	2,513.49	0.00	0.00	0.00
5,700.00	91.66	278.84	2,510.60	785.96	-2,491.65	2,612.48	0.00	0.00	0.00
5,800.00	91.66	278.84	2,507.70	801.32	-2,590.42	2,711.47	0.00	0.00	0.00
5,900.00	91.66	278.84	2,504.81	816.68	-2,689.19	2,810.46	0.00	0.00	0.00
5,927.93	91.66	278.84	2,504.00	820.97	-2,716.77	2,838.10	0.00	0.00	0.00
UTE AB 2 Lat 1 PBHL									

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 AB 2 Lat 1 PBHL	0.00	360.00	2,504.00	820.97	-2,716.77	1,165,570.25	2,381,564.95	37.1020966	-107.6206576
- plan hits target center									
- Point									



Database:	Grand Junction District	Local Co-ordinate Reference:	Well UTE AB 2
Company:	B.P.	TVD Reference:	GL 6443.33' & RKB 11' @ 6454.33usft (Aztec 507)
Project:	La Plata County, CO NAD83	MD Reference:	GL 6443.33' & RKB 11' @ 6454.33usft (Aztec 507)
Site:	UTE Pad	North Reference:	Grid
Well:	UTE AB 2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 1		
Design:	Plan #1		

Casing Points					
	Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)
	350.00	350.00	Surface Casing	9.62	12.25