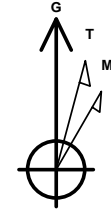




Company: B.P.
Project: La Plata County, CO NAD83
Site: UTE Pad
Well: UTE AB 2
Wellbore: Lateral 1 ST1
Design: Plan #1

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 ST1)

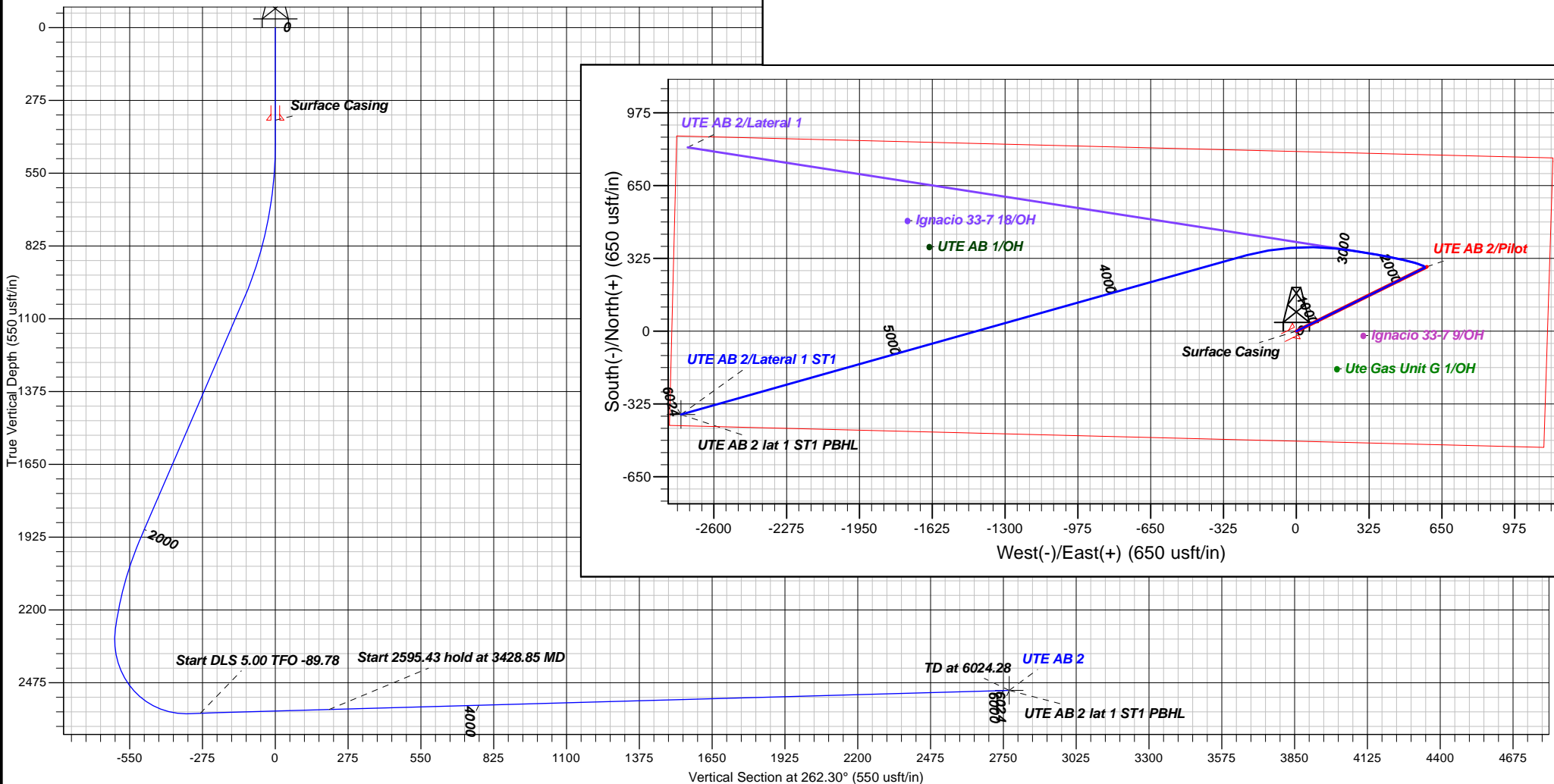
Created By: Janie Collins Date: 15:04, October 28 2015

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
UTE AB 2 lat 1 ST1 PBHL	2504.00	-371.41	-2746.75	1164377.87	2381534.97	37.0988208	-107.6206675

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target	Annotation
2937.50	91.66	278.84	2590.56	361.68	236.91	0.00	0.00	-283.23		
3428.85	91.60	254.26	2576.38	332.34	-249.60	5.00	-89.78	202.82		
6024.28	91.60	254.26	2504.00	-371.41	-2746.75	0.00	0.00	2771.75	UTE AB 2 lat 1 ST1 PBHL	





B.P.

La Plata County, CO NAD83

UTE Pad

UTE AB 2

Lateral 1 ST1

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 ST1		
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 ST1				
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:	2,937.50	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	262.30	

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
2,937.50	91.66	278.84	2,590.56	361.68	236.91	0.00	0.00	0.00	0.00	
3,428.85	91.60	254.26	2,576.38	332.34	-249.60	5.00	-0.01	-5.00	-89.78	
6,024.28	91.60	254.26	2,504.00	-371.41	-2,746.75	0.00	0.00	0.00	0.00	UTE AB 2 lat 1 ST1 P



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 ST1		
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)
2,937.50	91.66	278.84	2,590.56	361.68	236.91	-283.23	0.00	0.00	0.00
3,000.00	91.67	275.71	2,588.75	369.59	174.94	-222.89	5.00	0.01	-5.00
3,100.00	91.67	270.71	2,585.83	375.19	75.17	-124.77	5.00	0.00	-5.00
3,200.00	91.66	265.71	2,582.92	372.06	-24.70	-25.38	5.00	-0.01	-5.00
3,300.00	91.64	260.71	2,580.03	360.24	-123.93	74.54	5.00	-0.02	-5.00
3,400.00	91.61	255.70	2,577.19	339.82	-221.75	174.21	5.00	-0.03	-5.00
3,428.85	91.60	254.26	2,576.38	332.34	-249.60	202.82	5.00	-0.04	-5.00
3,500.00	91.60	254.26	2,574.40	313.05	-318.06	273.24	0.00	0.00	0.00
3,600.00	91.60	254.26	2,571.61	285.94	-414.27	372.22	0.00	0.00	0.00
3,700.00	91.60	254.26	2,568.82	258.82	-510.48	471.20	0.00	0.00	0.00
3,800.00	91.60	254.26	2,566.03	231.71	-606.69	570.18	0.00	0.00	0.00
3,900.00	91.60	254.26	2,563.24	204.59	-702.91	669.15	0.00	0.00	0.00
4,000.00	91.60	254.26	2,560.45	177.48	-799.12	768.13	0.00	0.00	0.00
4,100.00	91.60	254.26	2,557.67	150.36	-895.33	867.11	0.00	0.00	0.00
4,200.00	91.60	254.26	2,554.88	123.25	-991.55	966.09	0.00	0.00	0.00
4,300.00	91.60	254.26	2,552.09	96.13	-1,087.76	1,065.07	0.00	0.00	0.00
4,400.00	91.60	254.26	2,549.30	69.02	-1,183.97	1,164.05	0.00	0.00	0.00
4,500.00	91.60	254.26	2,546.51	41.90	-1,280.19	1,263.03	0.00	0.00	0.00
4,600.00	91.60	254.26	2,543.72	14.79	-1,376.40	1,362.01	0.00	0.00	0.00
4,700.00	91.60	254.26	2,540.93	-12.33	-1,472.61	1,460.99	0.00	0.00	0.00
4,800.00	91.60	254.26	2,538.14	-39.44	-1,568.83	1,559.96	0.00	0.00	0.00
4,900.00	91.60	254.26	2,535.35	-66.56	-1,665.04	1,658.94	0.00	0.00	0.00
5,000.00	91.60	254.26	2,532.57	-93.67	-1,761.25	1,757.92	0.00	0.00	0.00
5,100.00	91.60	254.26	2,529.78	-120.79	-1,857.47	1,856.90	0.00	0.00	0.00
5,200.00	91.60	254.26	2,526.99	-147.90	-1,953.68	1,955.88	0.00	0.00	0.00
5,300.00	91.60	254.26	2,524.20	-175.02	-2,049.89	2,054.86	0.00	0.00	0.00
5,400.00	91.60	254.26	2,521.41	-202.13	-2,146.11	2,153.84	0.00	0.00	0.00
5,500.00	91.60	254.26	2,518.62	-229.25	-2,242.32	2,252.82	0.00	0.00	0.00
5,600.00	91.60	254.26	2,515.83	-256.37	-2,338.53	2,351.80	0.00	0.00	0.00
5,700.00	91.60	254.26	2,513.04	-283.48	-2,434.75	2,450.78	0.00	0.00	0.00
5,800.00	91.60	254.26	2,510.25	-310.60	-2,530.96	2,549.75	0.00	0.00	0.00
5,900.00	91.60	254.26	2,507.47	-337.71	-2,627.17	2,648.73	0.00	0.00	0.00
6,000.00	91.60	254.26	2,504.68	-364.83	-2,723.39	2,747.71	0.00	0.00	0.00
6,024.28	91.60	254.26	2,504.00	-371.41	-2,746.75	2,771.75	0.00	0.00	0.00
UTE AB 2 lat 1 ST1 PBHL									

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 AB 2 lat 1 ST1 PBH - plan hits target center - Point	0.00	360.00	2,504.00	-371.41	-2,746.75	1,164,377.87	2,381,534.97	37.0988208	-107.6206676



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 ST1		
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