



Company: B.P.
Project: La Plata County, CO NAD83
Site: UTE AD Pad
Well: UTE AD 2



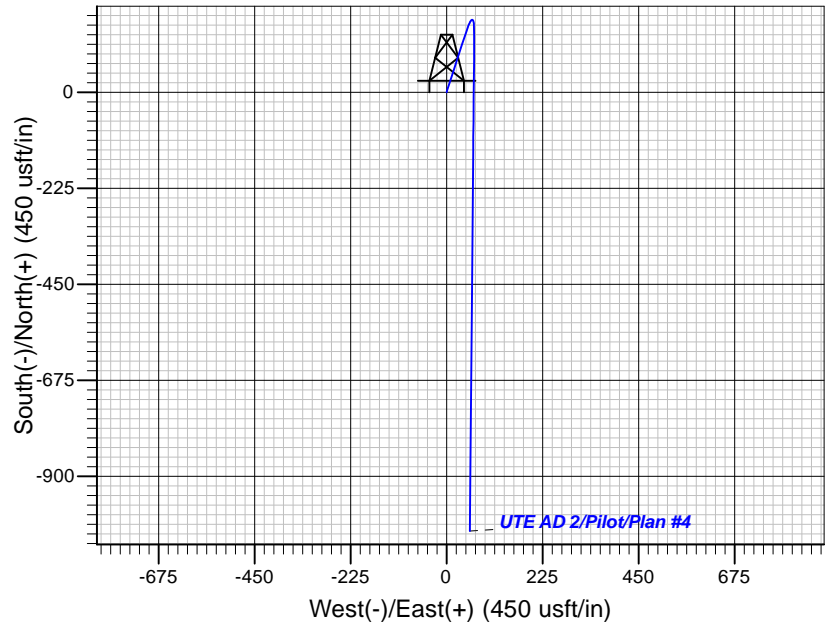
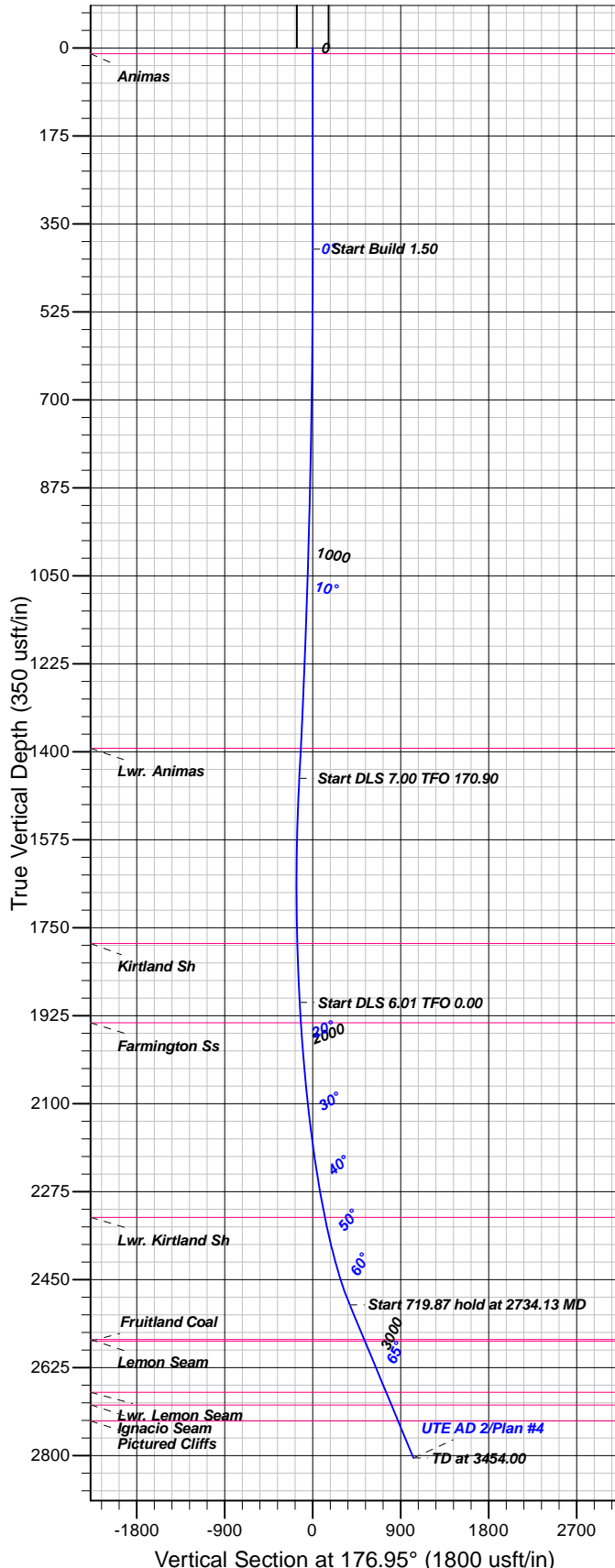
Well Details: UTE AD 2

GL 6498' & RKB 11' @ 6509.00usft (Aztec 507)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1173209.41	2380138.20	37.1229822	-107.6261445	

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



FORMATION TOP DETAILS

TVDPATH	MDPATH	FORMATION
11.00	11.00	Animas
1393.00	1404.54	Lwr. Animas
1781.00	1798.27	Kirtland Sh
1939.00	1960.86	Farmington Ss
2326.00	2424.09	Lwr. Kirtland Sh
2569.00	2897.40	Lemon Seam
2572.00	2904.50	Fruitland Coal
2674.00	3145.85	Lwr. Lemon Seam
2699.00	3205.01	Ignacio Seam
2731.00	3280.72	Pictured Cliffs

Plan: Plan #4

16:03, October 16 2017
Created By: Mel Mireles Jr.

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

CASING DETAILS

No casing data is available

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	
3	1466.67	16.00	18.00	1452.86	140.73	45.73	1.50	18.00	-138.10	
4	1918.35	16.00	180.50	1898.41	137.60	64.91	7.00	170.90	-133.96	
5	2734.13	65.00	180.50	2500.00	-376.19	60.42	6.01	0.00	378.87	
6	3454.00	65.00	180.50	2804.23	-1028.58	54.73	0.00	0.00	1030.04	

DESIGN TARGET DETAILS

No target data is available.



B.P.

La Plata County, CO NAD83

UTE AD Pad

UTE AD 2

Pilot

Plan: Plan #4

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:	Pilot		
Design:	Plan #4		

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

Design	Plan #4			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	176.95

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
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,466.67	16.00	18.00	1,452.86	140.73	45.73	1.50	1.50	0.00	18.00	
1,918.35	16.00	180.50	1,898.41	137.60	64.91	7.00	0.00	35.98	170.90	
2,734.13	65.00	180.50	2,500.00	-376.19	60.42	6.01	6.01	0.00	0.00	
3,454.00	65.00	180.50	2,804.23	-1,028.58	54.73	0.00	0.00	0.00	0.00	



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Site:	UTE AD Pad	North Reference:	Grid
Well:	UTE AD 2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot		
Design:	Plan #4		

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)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
11.00	0.00	0.00	11.00	0.00	0.00	0.00	0.00	0.00	0.00
Animas									
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	1.50	18.00	499.99	1.24	0.40	-1.22	1.50	1.50	0.00
600.00	3.00	18.00	599.91	4.98	1.62	-4.89	1.50	1.50	0.00
700.00	4.50	18.00	699.69	11.20	3.64	-10.99	1.50	1.50	0.00
800.00	6.00	18.00	799.27	19.90	6.47	-19.53	1.50	1.50	0.00
900.00	7.50	18.00	898.57	31.08	10.10	-30.50	1.50	1.50	0.00
1,000.00	9.00	18.00	997.54	44.73	14.53	-43.89	1.50	1.50	0.00
1,100.00	10.50	18.00	1,096.09	60.83	19.77	-59.69	1.50	1.50	0.00
1,200.00	12.00	18.00	1,194.16	79.38	25.79	-77.90	1.50	1.50	0.00
1,300.00	13.50	18.00	1,291.70	100.37	32.61	-98.50	1.50	1.50	0.00
1,400.00	15.00	18.00	1,388.62	123.78	40.22	-121.47	1.50	1.50	0.00
1,404.54	15.07	18.00	1,393.00	124.90	40.58	-122.57	1.50	1.50	0.00
Lwr. Animas									
1,466.67	16.00	18.00	1,452.86	140.73	45.73	-138.10	1.50	1.50	0.00
1,500.00	13.70	19.56	1,485.08	148.82	48.47	-146.03	7.00	-6.90	4.67
1,600.00	6.94	30.25	1,583.41	165.21	55.48	-162.03	7.00	-6.76	10.70
1,700.00	2.55	111.11	1,683.12	169.64	60.61	-166.18	7.00	-4.39	80.86
1,798.27	7.81	170.71	1,781.00	162.25	63.73	-158.63	7.00	5.35	60.65
Kirtland Sh									
1,800.00	7.93	170.99	1,782.71	162.01	63.77	-158.40	7.00	6.64	16.28
1,900.00	14.73	179.70	1,880.71	142.47	64.92	-138.81	7.00	6.81	8.71
1,918.35	16.00	180.50	1,898.41	137.60	64.91	-133.96	7.00	6.90	4.35
1,960.86	18.55	180.50	1,939.00	124.98	64.80	-121.36	6.01	6.01	0.00
Farmington Ss									
2,000.00	20.90	180.50	1,975.84	111.77	64.68	-108.17	6.01	6.01	0.00
2,100.00	26.91	180.50	2,067.21	71.26	64.33	-67.74	6.01	6.01	0.00
2,200.00	32.92	180.50	2,153.85	21.42	63.89	-17.99	6.01	6.01	0.00
2,300.00	38.92	180.50	2,234.80	-37.22	63.38	40.54	6.01	6.01	0.00
2,400.00	44.93	180.50	2,309.16	-104.01	62.80	107.20	6.01	6.01	0.00
2,424.09	46.38	180.50	2,326.00	-121.23	62.65	124.39	6.01	6.01	0.00
Lwr. Kirtland Sh									
2,500.00	50.94	180.50	2,376.13	-178.21	62.15	181.26	6.01	6.01	0.00
2,600.00	56.94	180.50	2,434.97	-259.01	61.45	261.91	6.01	6.01	0.00
2,700.00	62.95	180.50	2,485.03	-345.52	60.69	348.26	6.01	6.01	0.00
2,734.13	65.00	180.50	2,500.00	-376.19	60.42	378.87	6.01	6.01	0.00
2,800.00	65.00	180.50	2,527.84	-435.88	59.90	438.45	0.00	0.00	0.00
2,897.40	65.00	180.50	2,569.00	-524.15	59.13	526.55	0.00	0.00	0.00
Lemon Seam									
2,900.00	65.00	180.50	2,570.10	-526.51	59.11	528.91	0.00	0.00	0.00
2,904.50	65.00	180.50	2,572.00	-530.59	59.08	532.98	0.00	0.00	0.00
Fruitland Coal									
3,000.00	65.00	180.50	2,612.36	-617.14	58.32	619.36	0.00	0.00	0.00
3,100.00	65.00	180.50	2,654.62	-707.76	57.53	709.82	0.00	0.00	0.00
3,139.73	65.00	180.50	2,671.41	-743.77	57.22	745.76	0.00	0.00	0.00
UTE AD 2 FC (copy)									



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Wellbore:	Pilot		
Design:	Plan #4		

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)
3,145.85	65.00	180.50	2,674.00	-749.32	57.17	751.30	0.00	0.00	0.00
Lwr. Lemon Seam									
3,200.00	65.00	180.50	2,696.88	-798.39	56.74	800.28	0.00	0.00	0.00
3,205.01	65.00	180.50	2,699.00	-802.93	56.70	804.81	0.00	0.00	0.00
Ignacio Seam									
3,280.72	65.00	180.50	2,731.00	-871.55	56.10	873.30	0.00	0.00	0.00
Pictured Cliffs									
3,300.00	65.00	180.50	2,739.15	-889.02	55.95	890.74	0.00	0.00	0.00
3,400.00	65.00	180.50	2,781.41	-979.65	55.16	981.19	0.00	0.00	0.00
3,454.00	65.00	180.50	2,804.23	-1,028.58	54.73	1,030.04	0.00	0.00	0.00
UTE AD 2 Lat 1 PBHL (copy) - UTE AD 2 Lat 2 T5 (copy) - UTE AD 2 Lat 1 ST1 T3 (copy) - UTE AD 2 Lat 2 PBHL (copy) - UTE AD 2 Lat 1 ST									