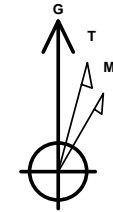




Company: B. P.
Project: La Plata County, CO NAD83
Site: Arthur Jones Pad
Well: Arthur Jones H A3
Wellbore: Lateral 1 ST1
Design: Plan #3

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: 1.28°
Magnetic North: 10.58°

Magnetic Field
Strength: 50292.2snT
Dip Angle: 63.67°
Date: 9/15/2015
Model: HDGM

WELL DETAILS: Arthur Jones H A3

Plan: Plan #3 (Arthur Jones H A3/Lateral 1 ST1)

Created By: Janie Collins Date: 11:17, September 28 2015

GL 6503.17' & RKB 11' @ 6514.17usft (Aztec 507)

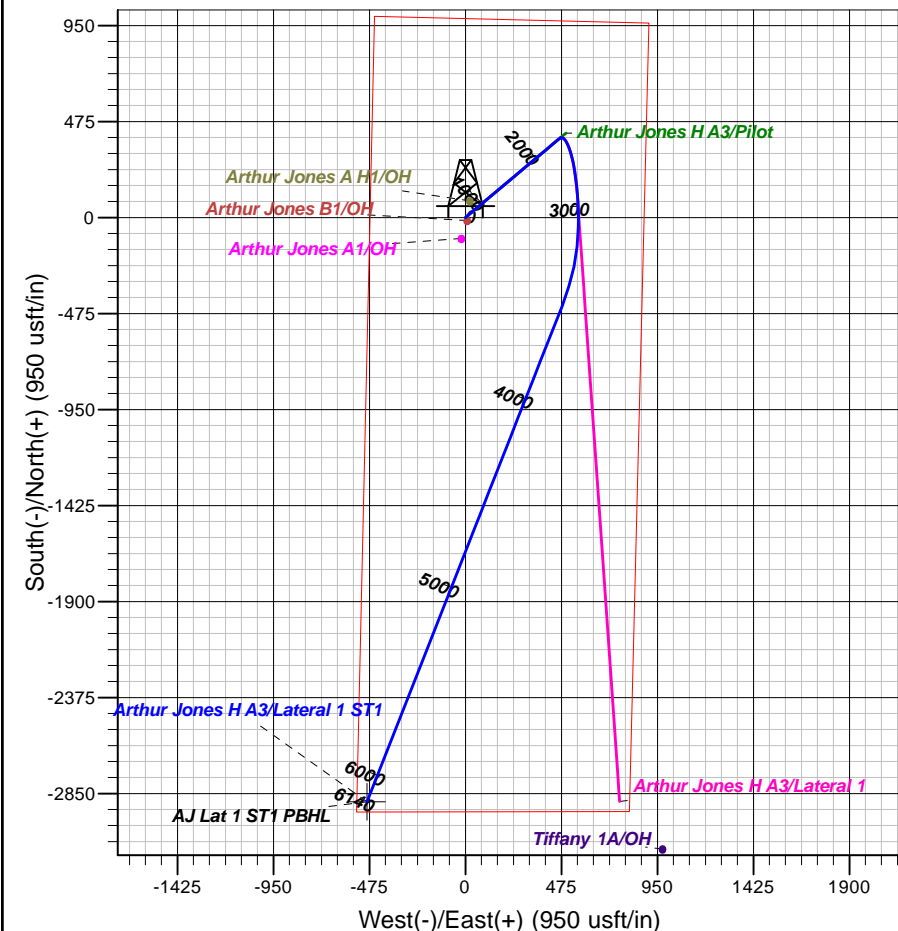
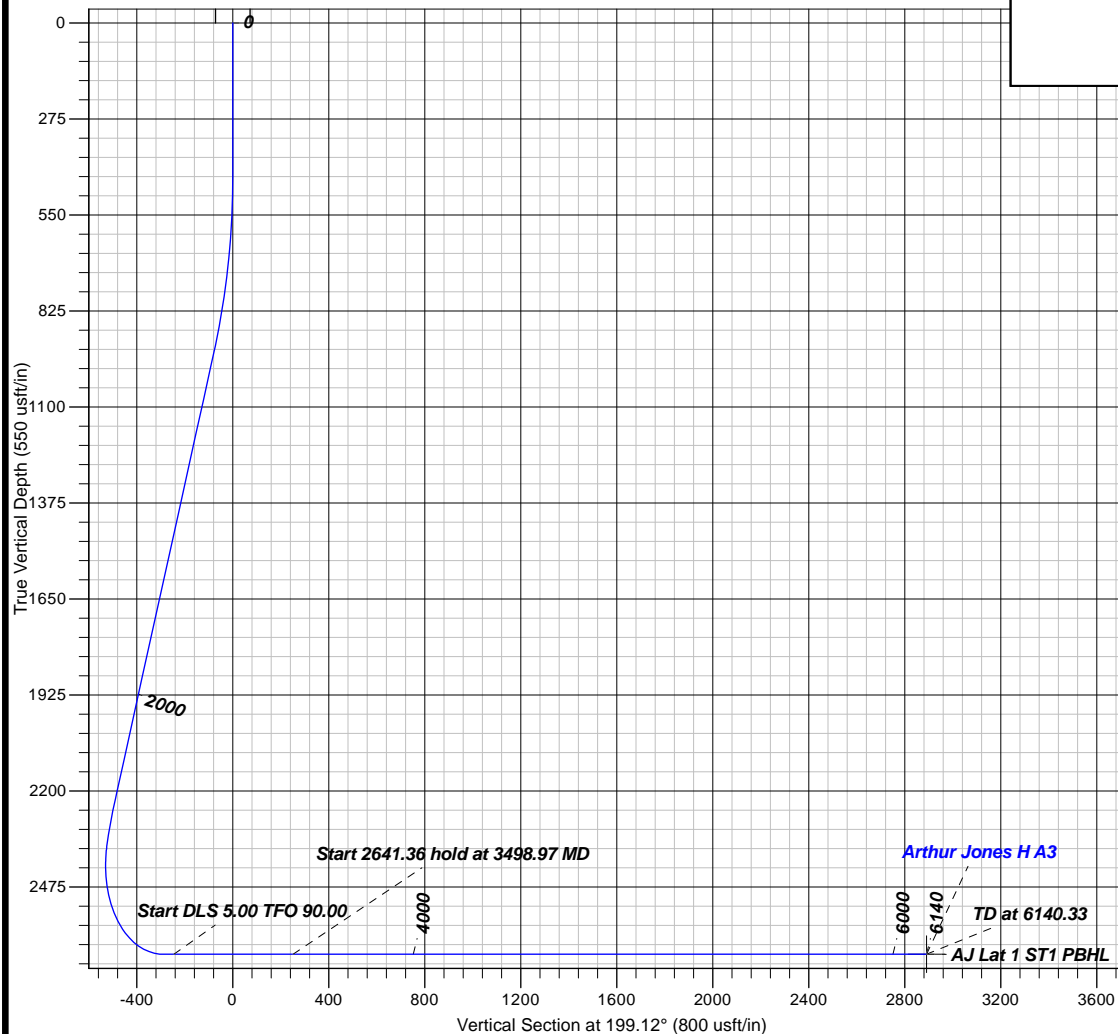
+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.00	0.00	1156462.25	2392254.18	37.0777494	-107.5833193

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
AJ Lat 1 ST1 PBHL	2668.00	-2891.07	-486.83	1153571.18	2391767.35	37.0697816	-107.5847664

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VFace	Target	Annotation
2989.64	90.00	176.01	2668.00	66.13	557.12	0.00	0.00	-244.97		
3498.97	90.00	201.48	2668.00	-433.14	480.32	5.00	90.00	251.92		
6140.33	90.00	201.48	2668.00	-2891.07	-486.83	0.00	0.00	2891.04	AJ Lat 1 ST1 PBHL	





B.P.

La Plata County, CO NAD83

Arthur Jones Pad

Arthur Jones H A3

Lateral 1 ST1

Plan: Plan #3

Standard Planning Report

28 September, 2015





Database:	Grand Junction District	Local Co-ordinate Reference:	Well Arthur Jones H A3
Company:	B.P.	TVD Reference:	GL 6503.17' & RKB 11' @ 6514.17usft (Aztec 507)
Project:	La Plata County, CO NAD83	MD Reference:	GL 6503.17' & RKB 11' @ 6514.17usft (Aztec 507)
Site:	Arthur Jones Pad	North Reference:	Grid
Well:	Arthur Jones H A3	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 1 ST1		
Design:	Plan #3		

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		Arthur Jones Pad			
Site Position:		Northing:	1,156,462.25 usft	Latitude:	37.0777494
From:	Map	Easting:	2,392,254.18 usft	Longitude:	-107.5833193
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	-1.28 °

Well	Arthur Jones H A3					
Well Position	+N/-S	0.00 usft	Northing:	1,156,462.25 usft	Latitude:	37.0777494
	+E/-W	0.00 usft	Easting:	2,392,254.18 usft	Longitude:	-107.5833193
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,503.17 usft

Wellbore	Lateral 1 ST1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	9/15/2015	9.30	63.67	50,292

Design	Plan #3				
Audit Notes:					
Version:	Phase:	PLAN		Tie On Depth:	2,989.64
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	199.12	

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
2,989.64	90.00	176.01	2,668.00	66.13	557.12	0.00	0.00	0.00	0.00	
3,498.97	90.00	201.48	2,668.00	-433.14	480.32	5.00	0.00	5.00	90.00	
6,140.33	90.00	201.48	2,668.00	-2,891.07	-486.83	0.00	0.00	0.00	0.00	AJ Lat 1 ST1 PBHL



Database:	Grand Junction District	Local Co-ordinate Reference:	Well Arthur Jones H A3
Company:	B.P.	TVD Reference:	GL 6503.17' & RKB 11' @ 6514.17usft (Aztec 507)
Project:	La Plata County, CO NAD83	MD Reference:	GL 6503.17' & RKB 11' @ 6514.17usft (Aztec 507)
Site:	Arthur Jones Pad	North Reference:	Grid
Well:	Arthur Jones H A3	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 1 ST1		
Design:	Plan #3		

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)
2,989.64	90.00	176.01	2,668.00	66.13	557.12	-244.97	0.00	0.00	0.00
3,000.00	90.00	176.53	2,668.00	55.79	557.80	-235.42	5.00	0.00	5.00
3,100.00	90.00	181.53	2,668.00	-44.16	559.49	-141.54	5.00	0.00	5.00
3,200.00	90.00	186.53	2,668.00	-143.88	552.46	-45.01	5.00	0.00	5.00
3,300.00	90.00	191.53	2,668.00	-242.61	536.77	53.41	5.00	0.00	5.00
3,400.00	90.00	196.53	2,668.00	-339.60	512.54	152.98	5.00	0.00	5.00
3,498.97	90.00	201.48	2,668.00	-433.14	480.32	251.92	5.00	0.00	5.00
3,500.00	90.00	201.48	2,668.00	-434.10	479.94	252.95	0.00	0.00	0.00
3,600.00	90.00	201.48	2,668.00	-527.16	443.32	352.87	0.00	0.00	0.00
3,700.00	90.00	201.48	2,668.00	-620.21	406.71	452.78	0.00	0.00	0.00
3,800.00	90.00	201.48	2,668.00	-713.27	370.09	552.70	0.00	0.00	0.00
3,900.00	90.00	201.48	2,668.00	-806.32	333.48	652.61	0.00	0.00	0.00
4,000.00	90.00	201.48	2,668.00	-899.38	296.86	752.53	0.00	0.00	0.00
4,100.00	90.00	201.48	2,668.00	-992.43	260.25	852.44	0.00	0.00	0.00
4,200.00	90.00	201.48	2,668.00	-1,085.49	223.63	952.36	0.00	0.00	0.00
4,300.00	90.00	201.48	2,668.00	-1,178.54	187.02	1,052.27	0.00	0.00	0.00
4,400.00	90.00	201.48	2,668.00	-1,271.60	150.40	1,152.19	0.00	0.00	0.00
4,500.00	90.00	201.48	2,668.00	-1,364.65	113.78	1,252.10	0.00	0.00	0.00
4,600.00	90.00	201.48	2,668.00	-1,457.71	77.17	1,352.02	0.00	0.00	0.00
4,700.00	90.00	201.48	2,668.00	-1,550.77	40.55	1,451.93	0.00	0.00	0.00
4,800.00	90.00	201.48	2,668.00	-1,643.82	3.94	1,551.85	0.00	0.00	0.00
4,900.00	90.00	201.48	2,668.00	-1,736.88	-32.68	1,651.76	0.00	0.00	0.00
5,000.00	90.00	201.48	2,668.00	-1,829.93	-69.29	1,751.68	0.00	0.00	0.00
5,100.00	90.00	201.48	2,668.00	-1,922.99	-105.91	1,851.59	0.00	0.00	0.00
5,200.00	90.00	201.48	2,668.00	-2,016.04	-142.52	1,951.51	0.00	0.00	0.00
5,300.00	90.00	201.48	2,668.00	-2,109.10	-179.14	2,051.43	0.00	0.00	0.00
5,400.00	90.00	201.48	2,668.00	-2,202.15	-215.75	2,151.34	0.00	0.00	0.00
5,500.00	90.00	201.48	2,668.00	-2,295.21	-252.37	2,251.26	0.00	0.00	0.00
5,600.00	90.00	201.48	2,668.00	-2,388.26	-288.99	2,351.17	0.00	0.00	0.00
5,700.00	90.00	201.48	2,668.00	-2,481.32	-325.60	2,451.09	0.00	0.00	0.00
5,800.00	90.00	201.48	2,668.00	-2,574.37	-362.22	2,551.00	0.00	0.00	0.00
5,900.00	90.00	201.48	2,668.00	-2,667.43	-398.83	2,650.92	0.00	0.00	0.00
6,000.00	90.00	201.48	2,668.00	-2,760.49	-435.45	2,750.83	0.00	0.00	0.00
6,100.00	90.00	201.48	2,668.00	-2,853.54	-472.06	2,850.75	0.00	0.00	0.00
6,140.33	90.00	201.48	2,668.00	-2,891.07	-486.83	2,891.04	0.00	0.00	0.00
AJ Lat 1 ST1 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									
AJ Lat 1 ST1 PBHL	0.00	0.00	2,668.00	-2,891.07	-486.83	1,153,571.18	2,391,767.35	37.0697816	-107.5847664
- plan hits target center									
- Point									