



Company: B.P.
Project: La Plata County, CO NAD83
Site: Marquez A2
Well: Marquez A2
Wellbore: Lateral 1
Design: Plan #2

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: 1.19°
Magnetic North: 10.31°

Magnetic Field
Strength: 50093.6snT
Dip Angle: 63.60°
Date: 8/15/2017
Model: HDGM

WELL DETAILS: Marquez A2

GL 6260' & RKB 11' @ 6271.00usft (Aztec 507)
+N/-S +E/-W Northing Easting Latitude Longitude
0.00 0.00 1139297.43 2433779.38 37.0330750 -107.4397939

Plan: Plan #2 (Marquez A2/Lateral 1)

Created By: Janie Collins Date: 19:15, September 06 2017

DESIGN TARGET DETAILS

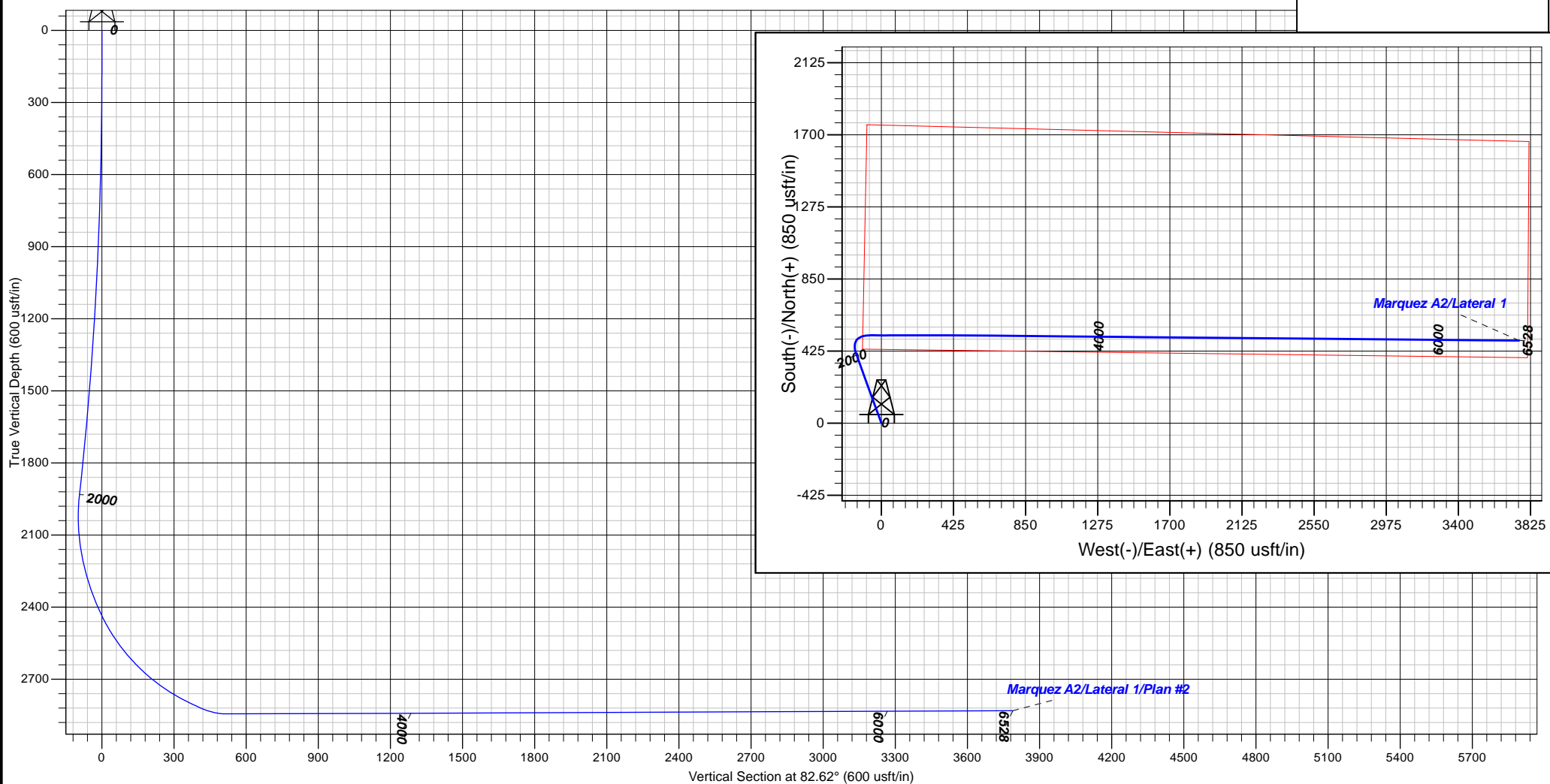
Name TVD +N/-S +E/-W Northing Easting
Marquez A2 Lat 1 PBHL2831.00 486.61 3757.92 1139784.04 2437537.30

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
3108.82	65.00	90.00	2818.16	517.97	342.96	0.00	0.00	406.64	
3235.06	90.24	90.54	2845.00	517.37	465.28	20.00	1.25	527.86	
6527.88	90.24	90.54	2831.00	486.61	3757.92	0.00	0.00	3789.29	Marquez A2 Lat 1 PBHL

FORMATION TOP DETAILS

No formation data is available





B.P.

La Plata County, CO NAD83

Marquez A2

Marquez A2

Lateral 1

Plan: Plan #2

Standard Planning Report

06 September, 2017





Database:	Grand Junction District	Local Co-ordinate Reference:	Well Marquez A2
Company:	B.P.	TVD Reference:	GL 6260' & RKB 11' @ 6271.00usft (Aztec 507)
Project:	La Plata County, CO NAD83	MD Reference:	GL 6260' & RKB 11' @ 6271.00usft (Aztec 507)
Site:	Marquez A2	North Reference:	Grid
Well:	Marquez A2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 1		
Design:	Plan #2		

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		Marquez A2			
Site Position:		Northing:	1,139,297.43 usft	Latitude:	37.0330749
From:	Map	Easting:	2,433,779.38 usft	Longitude:	-107.4397939
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	-1.19 °

Well	Marquez A2					
Well Position	+N/-S	0.00 usft	Northing:	1,139,297.43 usft	Latitude:	37.0330749
	+E/-W	0.00 usft	Easting:	2,433,779.38 usft	Longitude:	-107.4397939
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	6,260.00 usft

Wellbore	Lateral 1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	8/15/2017	9.12	63.60	50,094

Design	Plan #2			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	3,108.82
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	82.62

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
3,108.82	65.00	90.00	2,818.16	517.97	342.96	0.00	0.00	0.00	0.00	
3,235.06	90.24	90.54	2,845.00	517.37	465.28	20.00	20.00	0.42	1.25	
6,527.88	90.24	90.54	2,831.00	486.61	3,757.92	0.00	0.00	0.00	0.00	Marquez A2 Lat 1 PBI



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Well:	Marquez A2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 1		
Design:	Plan #2		

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)
3,108.82	65.00	90.00	2,818.16	517.97	342.96	406.64	0.00	0.00	0.00
3,200.00	83.23	90.40	2,843.01	517.66	430.29	493.21	20.00	20.00	0.43
3,235.06	90.24	90.54	2,845.00	517.37	465.28	527.86	20.00	20.00	0.40
3,300.00	90.24	90.54	2,844.73	516.76	530.21	592.18	0.00	0.00	0.00
3,400.00	90.24	90.54	2,844.30	515.83	630.20	691.23	0.00	0.00	0.00
3,500.00	90.24	90.54	2,843.87	514.90	730.20	790.27	0.00	0.00	0.00
3,600.00	90.24	90.54	2,843.45	513.96	830.19	889.32	0.00	0.00	0.00
3,700.00	90.24	90.54	2,843.02	513.03	930.19	988.37	0.00	0.00	0.00
3,800.00	90.24	90.54	2,842.60	512.09	1,030.18	1,087.41	0.00	0.00	0.00
3,900.00	90.24	90.54	2,842.17	511.16	1,130.18	1,186.46	0.00	0.00	0.00
4,000.00	90.24	90.54	2,841.75	510.23	1,230.17	1,285.51	0.00	0.00	0.00
4,100.00	90.24	90.54	2,841.32	509.29	1,330.17	1,384.56	0.00	0.00	0.00
4,200.00	90.24	90.54	2,840.90	508.36	1,430.16	1,483.60	0.00	0.00	0.00
4,300.00	90.24	90.54	2,840.47	507.42	1,530.16	1,582.65	0.00	0.00	0.00
4,400.00	90.24	90.54	2,840.05	506.49	1,630.15	1,681.70	0.00	0.00	0.00
4,500.00	90.24	90.54	2,839.62	505.55	1,730.15	1,780.74	0.00	0.00	0.00
4,600.00	90.24	90.54	2,839.20	504.62	1,830.14	1,879.79	0.00	0.00	0.00
4,700.00	90.24	90.54	2,838.77	503.69	1,930.14	1,978.84	0.00	0.00	0.00
4,800.00	90.24	90.54	2,838.35	502.75	2,030.13	2,077.88	0.00	0.00	0.00
4,900.00	90.24	90.54	2,837.92	501.82	2,130.13	2,176.93	0.00	0.00	0.00
5,000.00	90.24	90.54	2,837.50	500.88	2,230.12	2,275.98	0.00	0.00	0.00
5,100.00	90.24	90.54	2,837.07	499.95	2,330.11	2,375.02	0.00	0.00	0.00
5,200.00	90.24	90.54	2,836.65	499.02	2,430.11	2,474.07	0.00	0.00	0.00
5,300.00	90.24	90.54	2,836.22	498.08	2,530.10	2,573.12	0.00	0.00	0.00
5,400.00	90.24	90.54	2,835.80	497.15	2,630.10	2,672.16	0.00	0.00	0.00
5,500.00	90.24	90.54	2,835.37	496.21	2,730.09	2,771.21	0.00	0.00	0.00
5,600.00	90.24	90.54	2,834.95	495.28	2,830.09	2,870.26	0.00	0.00	0.00
5,700.00	90.24	90.54	2,834.52	494.34	2,930.08	2,969.30	0.00	0.00	0.00
5,800.00	90.24	90.54	2,834.10	493.41	3,030.08	3,068.35	0.00	0.00	0.00
5,900.00	90.24	90.54	2,833.67	492.48	3,130.07	3,167.40	0.00	0.00	0.00
6,000.00	90.24	90.54	2,833.24	491.54	3,230.07	3,266.45	0.00	0.00	0.00
6,100.00	90.24	90.54	2,832.82	490.61	3,330.06	3,365.49	0.00	0.00	0.00
6,200.00	90.24	90.54	2,832.39	489.67	3,430.06	3,464.54	0.00	0.00	0.00
6,300.00	90.24	90.54	2,831.97	488.74	3,530.05	3,563.59	0.00	0.00	0.00
6,400.00	90.24	90.54	2,831.54	487.80	3,630.05	3,662.63	0.00	0.00	0.00
6,500.00	90.24	90.54	2,831.12	486.87	3,730.04	3,761.68	0.00	0.00	0.00
6,524.91	90.24	90.54	2,831.01	486.64	3,754.95	3,786.35	0.00	0.00	0.00
Marquez A2 Lat 1 ST1 PBHL									
6,527.88	90.24	90.54	2,831.00	486.61	3,757.92	3,789.29	0.00	0.00	0.00
Marquez A2 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
Marquez A2 Lat 1 PBHL	0.00	360.00	2,831.00	486.61	3,757.92	1,139,784.04	2,437,537.30	37.0346247	-107.4269579
- hit/miss target									
- Shape									
- Point									



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