



Company: B.P.
Project: La Plata County, CO NAD83
Site: Second Pad
Well: Second 17U-34-06 3



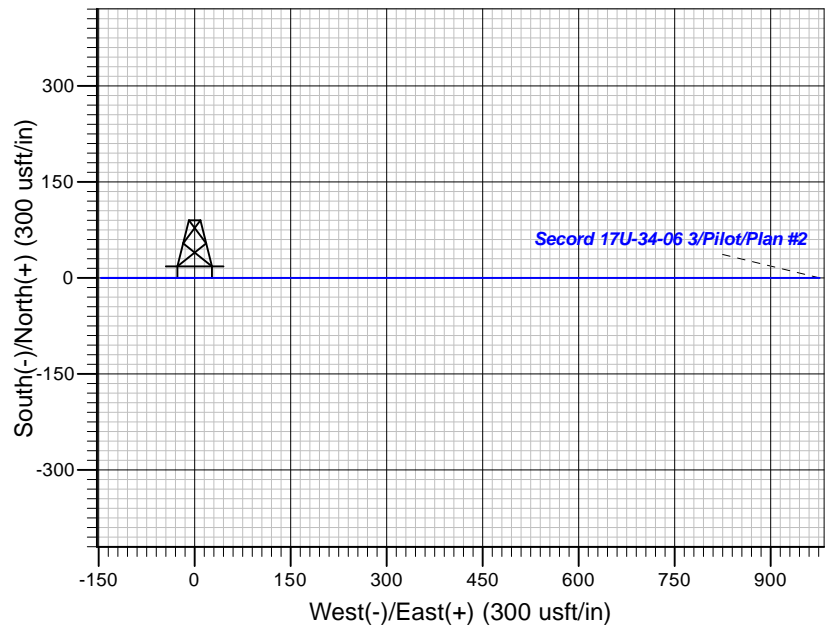
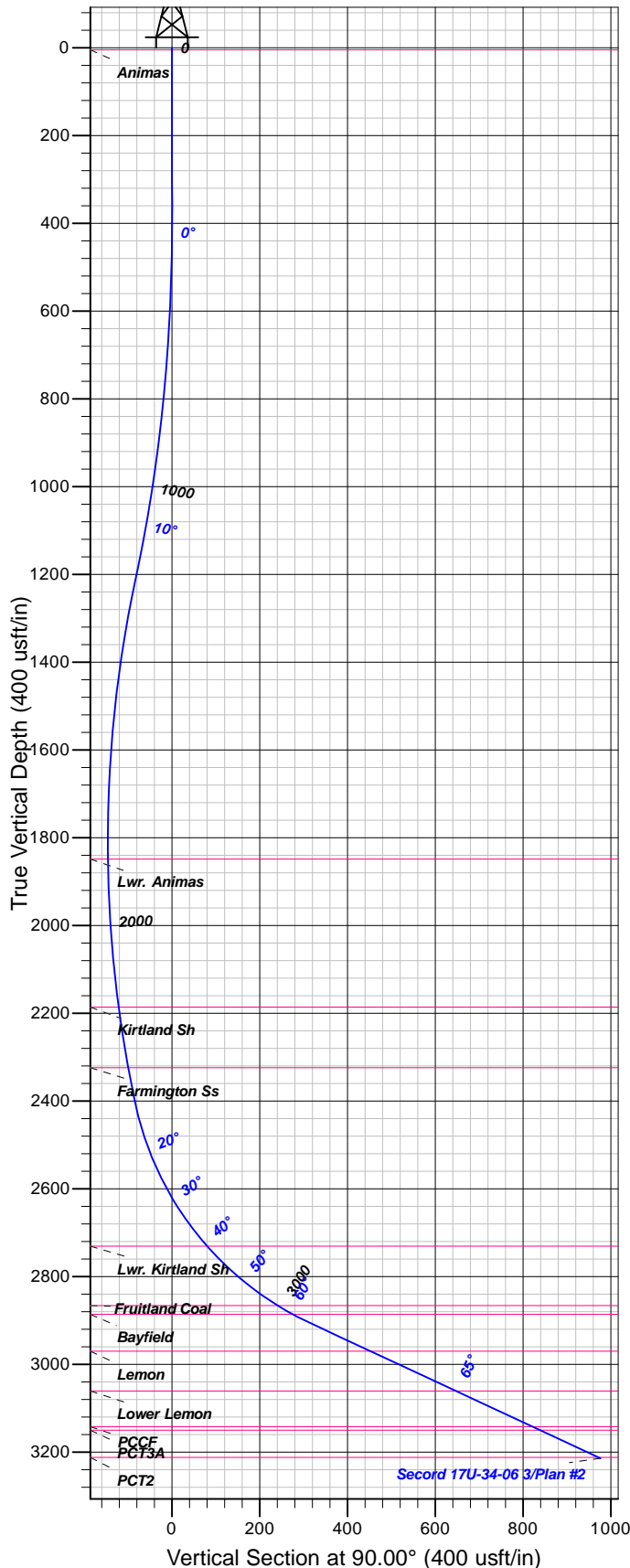
Well Details: Second 17U-34-06 3

GL 7221' & RKB 11' @ 7232.00usft (Aztec 507)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1196114.81	2409107.39	37.1876430	-107.5285171	

Azimuths to Grid North
True North: 1.24°
Magnetic North: 10.46°

Magnetic Field
Strength: 50120.3snT
Dip Angle: 63.67°
Date: 1/3/2018
Model: HDGM



FORMATION TOP DETAILS

TVDP	MD	Formation
5.00	5.00	Animas
1849.00	1859.21	Lwr. Animas
2186.00	2197.30	Kirtland Sh
2324.00	2337.01	Farmington Ss
2731.00	2788.65	Lwr. Kirtland Sh
2866.00	2999.03	Fruitland Coal
2886.00	3038.94	Bayfield
2970.00	3234.88	Lemon
3061.00	3450.21	Lower Lemon
3142.00	3641.87	PCCF
3150.00	3660.80	PCT3A
3212.00	3807.50	PCT2

Plan: Plan #2

11:06, March 22 2018
Created By: Janie Collins

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	420.00	0.00	0.00	420.00	0.00	0.00	0.00	0.00	0.00	
3	1220.00	12.00	270.00	1214.16	0.00	-83.47	1.50	270.00	-83.47	
4	2420.00	12.00	90.00	2405.41	0.00	-83.47	2.00	180.00	-83.47	
5	3082.50	65.00	90.00	2905.60	0.00	314.40	8.00	0.00	314.40	
6	3813.00	65.00	90.00	3214.32	0.00	976.46	0.00	0.00	976.46	

DESIGN TARGET DETAILS

No target data is available.



B.P.

La Plata County, CO NAD83

Secord Pad

Secord 17U-34-06 3

Pilot

Plan: Plan #2

Standard Planning Report

22 March, 2018





Database:	Grand Junction District	Local Co-ordinate Reference:	Well Secord 17U-34-06 3
Company:	B.P.	TVD Reference:	GL 7221' & RKB 11' @ 7232.00usft (Aztec 507)
Project:	La Plata County, CO NAD83	MD Reference:	GL 7221' & RKB 11' @ 7232.00usft (Aztec 507)
Site:	Secord Pad	North Reference:	Grid
Well:	Secord 17U-34-06 3	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot		
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	Secord Pad			
Site Position:		Northing:	1,196,144.95 usft	Latitude: 37.1877252
From: Map		Easting:	2,409,098.88 usft	Longitude: -107.5285486
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence: -1.24 °

Well	Secord 17U-34-06 3			
Well Position	+N/-S	-30.14 usft	Northing:	1,196,114.81 usft
	+E/-W	8.51 usft	Easting:	2,409,107.39 usft
Position Uncertainty	0.00 usft		Wellhead Elevation:	0.00 usft
			Ground Level:	7,221.00 usft

Wellbore	Pilot				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	1/3/2018	9.22	63.67	50,120

Design	Plan #2			
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	90.00

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	
420.00	0.00	0.00	420.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,220.00	12.00	270.00	1,214.16	0.00	-83.47	1.50	1.50	0.00	270.00	
2,420.00	12.00	90.00	2,405.41	0.00	-83.47	2.00	0.00	15.00	180.00	
3,082.50	65.00	90.00	2,905.60	0.00	314.40	8.00	8.00	0.00	0.00	
3,813.00	65.00	90.00	3,214.32	0.00	976.46	0.00	0.00	0.00	0.00	



Database:	Grand Junction District	Local Co-ordinate Reference:	Well Secord 17U-34-06 3
Company:	B.P.	TVD Reference:	GL 7221' & RKB 11' @ 7232.00usft (Aztec 507)
Project:	La Plata County, CO NAD83	MD Reference:	GL 7221' & RKB 11' @ 7232.00usft (Aztec 507)
Site:	Secord Pad	North Reference:	Grid
Well:	Secord 17U-34-06 3	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot		
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)	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5.00	0.00	0.00	5.00	0.00	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	0.00
200.00	0.00	0.00	200.00	0.00	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	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
420.00	0.00	0.00	420.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	1.20	270.00	499.99	0.00	-0.84	-0.84	1.50	1.50	0.00	0.00
600.00	2.70	270.00	599.93	0.00	-4.24	-4.24	1.50	1.50	0.00	0.00
700.00	4.20	270.00	699.75	0.00	-10.26	-10.26	1.50	1.50	0.00	0.00
800.00	5.70	270.00	799.37	0.00	-18.89	-18.89	1.50	1.50	0.00	0.00
900.00	7.20	270.00	898.74	0.00	-30.12	-30.12	1.50	1.50	0.00	0.00
1,000.00	8.70	270.00	997.77	0.00	-43.95	-43.95	1.50	1.50	0.00	0.00
1,100.00	10.20	270.00	1,096.41	0.00	-60.37	-60.37	1.50	1.50	0.00	0.00
1,200.00	11.70	270.00	1,194.59	0.00	-79.36	-79.36	1.50	1.50	0.00	0.00
1,220.00	12.00	270.00	1,214.16	0.00	-83.47	-83.47	1.50	1.50	0.00	0.00
1,300.00	10.40	270.00	1,292.64	0.00	-99.01	-99.01	2.00	-2.00	0.00	0.00
1,400.00	8.40	270.00	1,391.29	0.00	-115.34	-115.34	2.00	-2.00	0.00	0.00
1,500.00	6.40	270.00	1,490.45	0.00	-128.22	-128.22	2.00	-2.00	0.00	0.00
1,600.00	4.40	270.00	1,590.00	0.00	-137.63	-137.63	2.00	-2.00	0.00	0.00
1,700.00	2.40	270.00	1,689.82	0.00	-143.56	-143.56	2.00	-2.00	0.00	0.00
1,800.00	0.40	270.00	1,789.79	0.00	-146.00	-146.00	2.00	-2.00	0.00	0.00
1,859.21	0.78	90.00	1,849.00	0.00	-145.80	-145.80	2.00	0.65	303.98	
Lwr. Animas										
1,900.00	1.60	90.00	1,889.78	0.00	-144.96	-144.96	2.00	2.00	0.00	
2,000.00	3.60	90.00	1,989.67	0.00	-140.42	-140.42	2.00	2.00	0.00	
2,100.00	5.60	90.00	2,089.34	0.00	-132.40	-132.40	2.00	2.00	0.00	
2,197.30	7.55	90.00	2,186.00	0.00	-121.26	-121.26	2.00	2.00	0.00	
Kirtland Sh										
2,200.00	7.60	90.00	2,188.67	0.00	-120.91	-120.91	2.00	2.00	0.00	
2,300.00	9.60	90.00	2,287.54	0.00	-105.95	-105.95	2.00	2.00	0.00	
2,337.01	10.34	90.00	2,324.00	0.00	-99.55	-99.55	2.00	2.00	0.00	
Farmington Ss										
2,400.00	11.60	90.00	2,385.83	0.00	-87.56	-87.56	2.00	2.00	0.00	
2,420.00	12.00	90.00	2,405.41	0.00	-83.47	-83.47	2.00	2.00	0.00	
2,500.00	18.40	90.00	2,482.57	0.00	-62.51	-62.51	8.00	8.00	0.00	
2,600.00	26.40	90.00	2,574.95	0.00	-24.43	-24.43	8.00	8.00	0.00	
2,700.00	34.40	90.00	2,661.13	0.00	26.13	26.13	8.00	8.00	0.00	
2,788.65	41.49	90.00	2,731.00	0.00	80.61	80.61	8.00	8.00	0.00	
Lwr. Kirtland Sh										
2,800.00	42.40	90.00	2,739.44	0.00	88.20	88.20	8.00	8.00	0.00	
2,900.00	50.40	90.00	2,808.34	0.00	160.56	160.56	8.00	8.00	0.00	
2,999.03	58.32	90.00	2,866.00	0.00	240.97	240.97	8.00	8.00	0.00	
Fruitland Coal										
3,000.00	58.40	90.00	2,866.51	0.00	241.80	241.80	8.00	8.00	0.00	
3,038.94	61.51	90.00	2,886.00	0.00	275.50	275.50	8.00	8.00	0.00	
Bayfield										
3,082.50	65.00	90.00	2,905.60	0.00	314.40	314.40	8.00	8.00	0.00	
3,100.00	65.00	90.00	2,913.00	0.00	330.26	330.26	0.00	0.00	0.00	
3,200.00	65.00	90.00	2,955.26	0.00	420.89	420.89	0.00	0.00	0.00	
3,234.88	65.00	90.00	2,970.00	0.00	452.51	452.51	0.00	0.00	0.00	



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Site:	Secord Pad	North Reference:	Grid
Well:	Secord 17U-34-06 3	Survey Calculation Method:	Minimum Curvature
Wellbore:	Pilot		
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)
Lemon									
3,300.00	65.00	90.00	2,997.52	0.00	511.52	511.52	0.00	0.00	0.00
3,400.00	65.00	90.00	3,039.78	0.00	602.15	602.15	0.00	0.00	0.00
3,450.21	65.00	90.00	3,061.00	0.00	647.66	647.66	0.00	0.00	0.00
Lower Lemon									
3,500.00	65.00	90.00	3,082.04	0.00	692.78	692.78	0.00	0.00	0.00
3,600.00	65.00	90.00	3,124.30	0.00	783.41	783.41	0.00	0.00	0.00
3,641.87	65.00	90.00	3,142.00	0.00	821.36	821.36	0.00	0.00	0.00
PCCF									
3,660.80	65.00	90.00	3,150.00	0.00	838.52	838.52	0.00	0.00	0.00
PCT3A									
3,700.00	65.00	90.00	3,166.57	0.00	874.04	874.04	0.00	0.00	0.00
3,800.00	65.00	90.00	3,208.83	0.00	964.67	964.67	0.00	0.00	0.00
3,807.50	65.00	90.00	3,212.00	0.00	971.48	971.48	0.00	0.00	0.00
PCT2									
3,813.00	65.00	90.00	3,214.32	0.00	976.46	976.46	0.00	0.00	0.00

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
5.00	5.00	Animas		0.00	0.00
1,859.21	1,849.00	Lwr. Animas		0.00	0.00
2,197.30	2,186.00	Kirtland Sh		0.00	0.00
2,337.01	2,324.00	Farmington Ss		0.00	0.00
2,788.65	2,731.00	Lwr. Kirtland Sh		0.00	0.00
2,999.03	2,866.00	Fruitland Coal		0.00	0.00
3,038.94	2,886.00	Bayfield		0.00	0.00
3,234.88	2,970.00	Lemon		0.00	0.00
3,450.21	3,061.00	Lower Lemon		0.00	0.00
3,641.87	3,142.00	PCCF		0.00	0.00
3,660.80	3,150.00	PCT3A		0.00	0.00
3,807.50	3,212.00	PCT2		0.00	0.00