



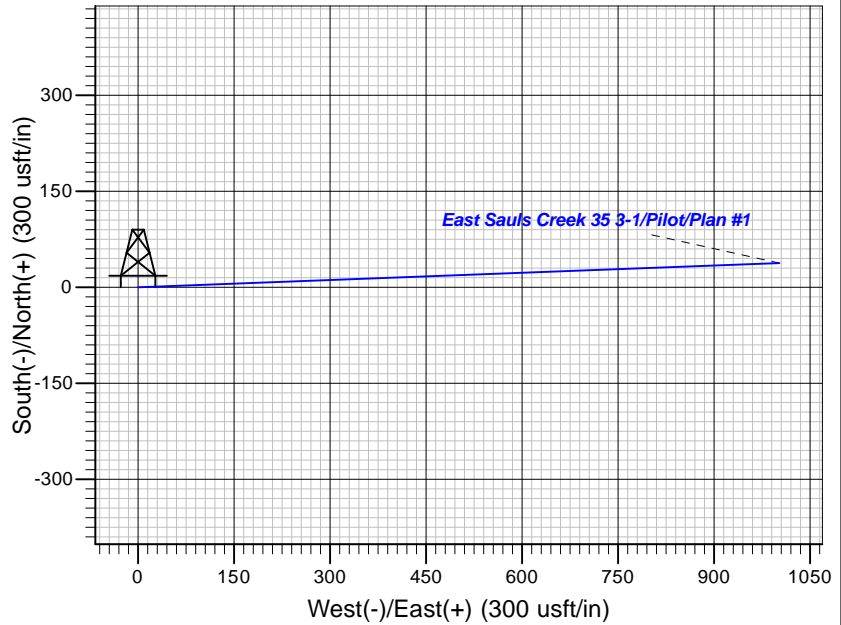
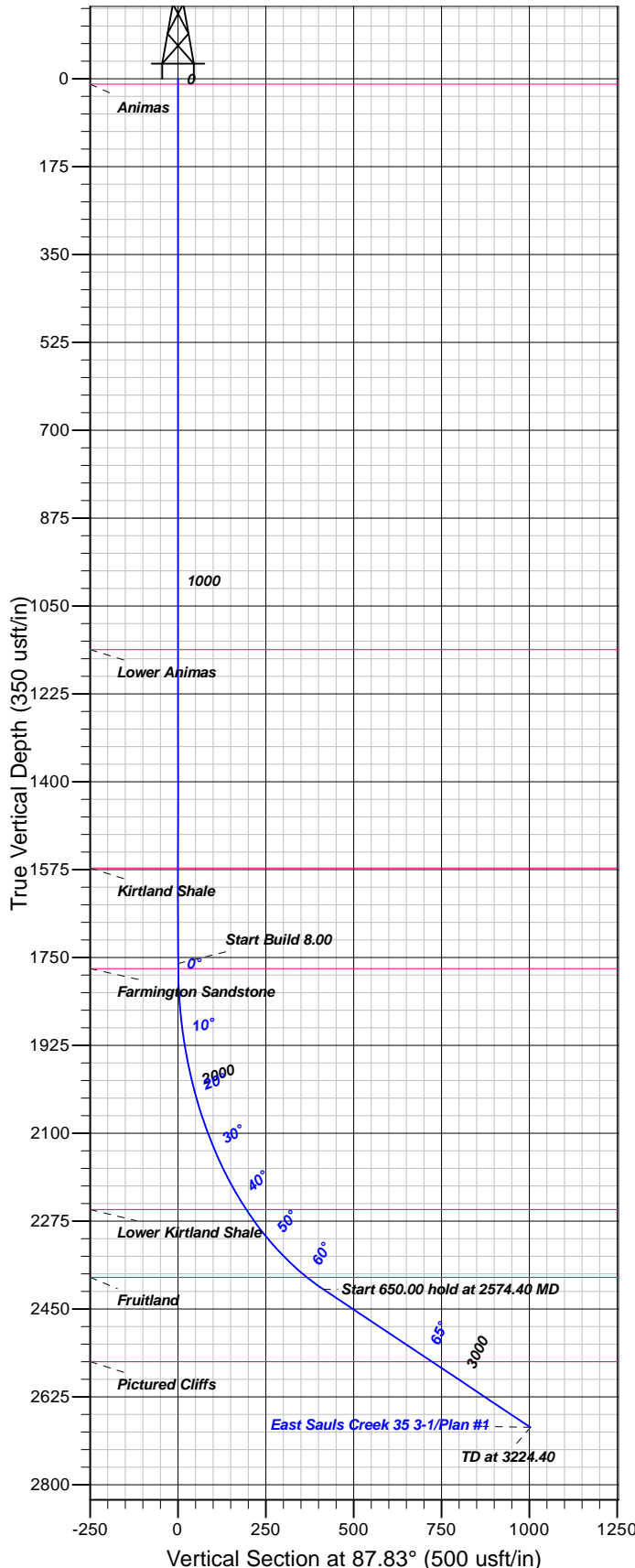
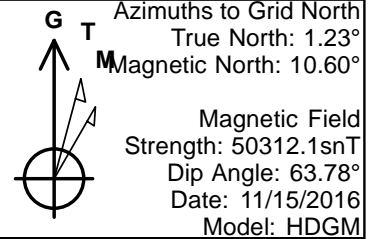
Company: B.P.  
Project: La Plata County, CO NAD83  
Site: East Sauls Creek Pad  
Well: East Sauls Creek 35 3-1



### Well Details: East Sauls Creek 35 3-1

GL 7326' & RKB 11' @ 7337.00usft (Aztec 507)

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.00	0.00	1222360.08	2414796.92	37.2600439	-107.5109306	



#### FORMATION TOP DETAILS

TVDPth	MDPath	Formation
11.00	11.00	Animas
1137.00	1137.00	Lower Animas
1572.00	1572.00	Kirtland Shale
1772.00	1772.00	Farmington Sandstone
2252.00	2301.67	Lower Kirtland Shale
2387.00	2521.73	Fruitland
2555.00	2915.14	Pictured Cliffs

#### Plan: Plan #1

15:34, December 14 2016  
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	1761.90	0.00	0.00	1761.90	0.00	0.00	0.00	0.00	0.00	
3	2574.40	65.00	87.83	2411.00	15.66	413.22	8.00	87.83	413.52	
4	3224.40	65.00	87.83	2685.70	37.96	1001.90	0.00	0.00	1002.62	

#### DESIGN TARGET DETAILS

No target data is available.



**B.P.**

**La Plata County, CO NAD83  
East Sauls Creek Pad  
East Sauls Creek 35 3-1**

**Pilot**

**Plan: Plan #1**

## **Standard Planning Report**

**14 December, 2016**



[www.scientificdrilling.com](http://www.scientificdrilling.com)





<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well East Sauls Creek 35 3-1
<b>Company:</b>	B.P.	<b>TVD Reference:</b>	GL 7326' & RKB 11' @ 7337.00usft (Aztec 507)
<b>Project:</b>	La Plata County, CO NAD83	<b>MD Reference:</b>	GL 7326' & RKB 11' @ 7337.00usft (Aztec 507)
<b>Site:</b>	East Sauls Creek Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	East Sauls Creek 35 3-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Pilot		
<b>Design:</b>	Plan #1		

<b>Project</b>	La Plata County, CO NAD83		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Southern Zone		

Site		East Sauls Creek Pad			
Site Position:		Northing:	1,227,806.45 usft	Latitude:	37.2749933
From:	Map	Easting:	2,414,712.24 usft	Longitude:	-107.5116245
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	-1.23 °

Well	East Sauls Creek 35 3-1					
Well Position	+N/-S	-5,446.37 usft	Northing:	1,222,360.08 usft	Latitude:	37.2600439
	+E/-W	84.68 usft	Easting:	2,414,796.92 usft	Longitude:	-107.5109306
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	7,326.00 usft

<b>Wellbore</b>	Pilot				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	HDGM	11/15/2016	9.37	63.78	50,312

<b>Design</b>	Plan #1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	87.83

<b>Plan Sections</b>										
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	
1,761.90	0.00	0.00	1,761.90	0.00	0.00	0.00	0.00	0.00	0.00	
2,574.40	65.00	87.83	2,411.00	15.66	413.22	8.00	8.00	0.00	87.83	
3,224.40	65.00	87.83	2,685.70	37.96	1,001.90	0.00	0.00	0.00	0.00	



<b>Database:</b>	Grand Junction District	<b>Local Co-ordinate Reference:</b>	Well East Sauls Creek 35 3-1
<b>Company:</b>	B.P.	<b>TVD Reference:</b>	GL 7326' & RKB 11' @ 7337.00usft (Aztec 507)
<b>Project:</b>	La Plata County, CO NAD83	<b>MD Reference:</b>	GL 7326' & RKB 11' @ 7337.00usft (Aztec 507)
<b>Site:</b>	East Sauls Creek Pad	<b>North Reference:</b>	Grid
<b>Well:</b>	East Sauls Creek 35 3-1	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Pilot		
<b>Design:</b>	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)
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
<b>Animas</b>									
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	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,137.00	0.00	0.00	1,137.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Lower Animas</b>									
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,572.00	0.00	0.00	1,572.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Kirtland Shale</b>									
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,761.90	0.00	0.00	1,761.90	0.00	0.00	0.00	0.00	0.00	0.00
1,772.00	0.81	87.83	1,772.00	0.00	0.07	0.07	8.00	8.00	0.00
<b>Farmington Sandstone</b>									
1,800.00	3.05	87.83	1,799.98	0.04	1.01	1.01	8.00	8.00	0.00
1,900.00	11.05	87.83	1,899.15	0.50	13.26	13.27	8.00	8.00	0.00
2,000.00	19.05	87.83	1,995.64	1.48	39.19	39.22	8.00	8.00	0.00
2,100.00	27.05	87.83	2,087.58	2.97	78.28	78.33	8.00	8.00	0.00
2,200.00	35.05	87.83	2,173.19	4.92	129.77	129.87	8.00	8.00	0.00
2,300.00	43.05	87.83	2,250.78	7.30	192.67	192.81	8.00	8.00	0.00
2,301.67	43.18	87.83	2,252.00	7.34	193.81	193.95	8.00	8.00	0.00
<b>Lower Kirtland Shale</b>									
2,400.00	51.05	87.83	2,318.87	10.07	265.76	265.95	8.00	8.00	0.00
2,500.00	59.05	87.83	2,376.11	13.17	347.59	347.84	8.00	8.00	0.00
2,521.73	60.79	87.83	2,387.00	13.88	366.38	366.64	8.00	8.00	0.00
<b>Fruitland</b>									
2,574.40	65.00	87.83	2,411.00	15.66	413.22	413.52	8.00	8.00	0.00
2,600.00	65.00	87.83	2,421.81	16.54	436.41	436.72	0.00	0.00	0.00
2,700.00	65.00	87.83	2,464.08	19.97	526.97	527.35	0.00	0.00	0.00
2,800.00	65.00	87.83	2,506.34	23.40	617.54	617.98	0.00	0.00	0.00
2,900.00	65.00	87.83	2,548.60	26.83	708.10	708.61	0.00	0.00	0.00
2,915.14	65.00	87.83	2,555.00	27.35	721.82	722.34	0.00	0.00	0.00
<b>Pictured Cliffs</b>									
3,000.00	65.00	87.83	2,590.86	30.26	798.67	799.24	0.00	0.00	0.00
3,100.00	65.00	87.83	2,633.12	33.69	889.24	889.87	0.00	0.00	0.00
3,200.00	65.00	87.83	2,675.39	37.13	979.80	980.51	0.00	0.00	0.00
3,224.40	65.00	87.83	2,685.70	37.96	1,001.90	1,002.62	0.00	0.00	0.00



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<b>Wellbore:</b>	Pilot		
<b>Design:</b>	Plan #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
11.00	11.00	Animas		0.00	360.00	
1,137.00	1,137.00	Lower Animas		0.00	360.00	
1,572.00	1,572.00	Kirtland Shale		0.00	360.00	
1,772.00	1,772.00	Farmington Sandstone		0.00	360.00	
2,301.67	2,252.00	Lower Kirtland Shale		0.00	360.00	
2,521.73	2,387.00	Fruitland		0.00	360.00	
2,915.14	2,555.00	Pictured Cliffs		0.00	360.00	