



Company: B.P.
Project: La Plata County, CO NAD83
Site: East Sauls Creek Pad
Well: East Sauls Creek 26 2-1
Wellbore: Lateral 2 (Lemon)
Design: Plan #1

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



Plan: Plan #1 (East Sauls Creek 26 2-1/Lateral 2 (Lemon))

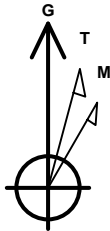
Created By: Janie Collins Date: 14:02, November 29 2016

WELL DETAILS: East Sauls Creek 26 2-1

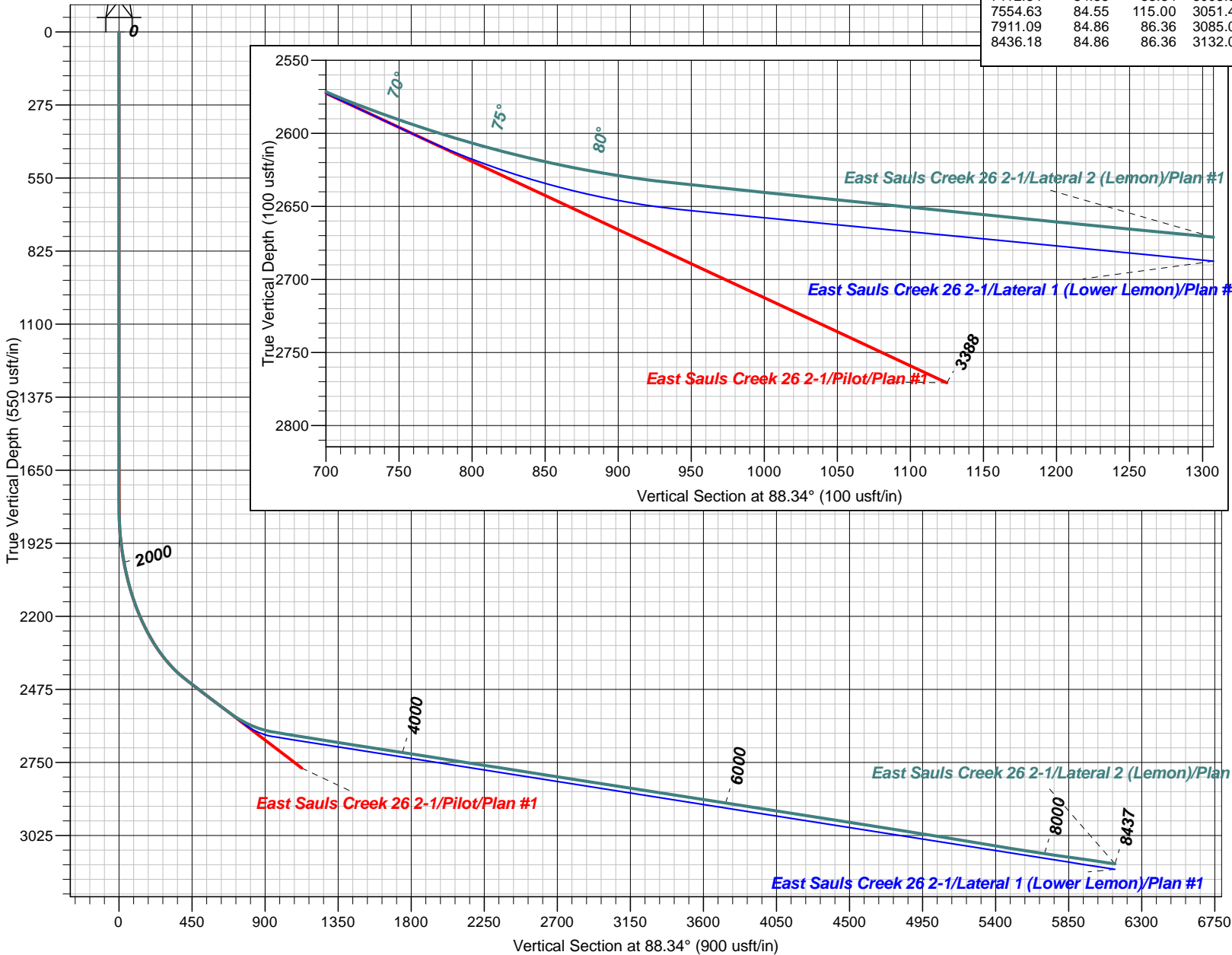
+N/-S +E/-W GL 7466' & RKB 11' @ 7477.00usft (Aztec 507) 7466.00
0.00 0.00 Northing Easting Latitude Longitude Slot
1225165.69 2414617.17 37.2677368 -107.5117557

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
2878.00	65.00	88.34	2555.53	19.21	662.93	0.00	0.00	663.21	
3175.13	84.55	65.00	2634.19	87.14	937.74	10.00	-52.72	939.86	
3225.13	84.55	65.00	2638.94	108.18	982.85	0.00	0.00	985.56	
3612.34	84.55	88.34	2676.23	196.43	1355.29	6.00	91.12	1360.40	
7112.34	84.55	88.34	3008.65	297.36	4838.01	0.00	0.00	4844.58	
7554.63	84.55	115.00	3051.43	209.12	5265.25	6.00	91.29	5269.09	
7911.09	84.86	86.36	3085.00	144.05	5610.35	8.00	-90.73	5612.17	
8436.18	84.86	86.36	3132.00	177.25	6132.28	0.00	0.00	6134.84	ESC 26 2-1 Lat 2 PBHL

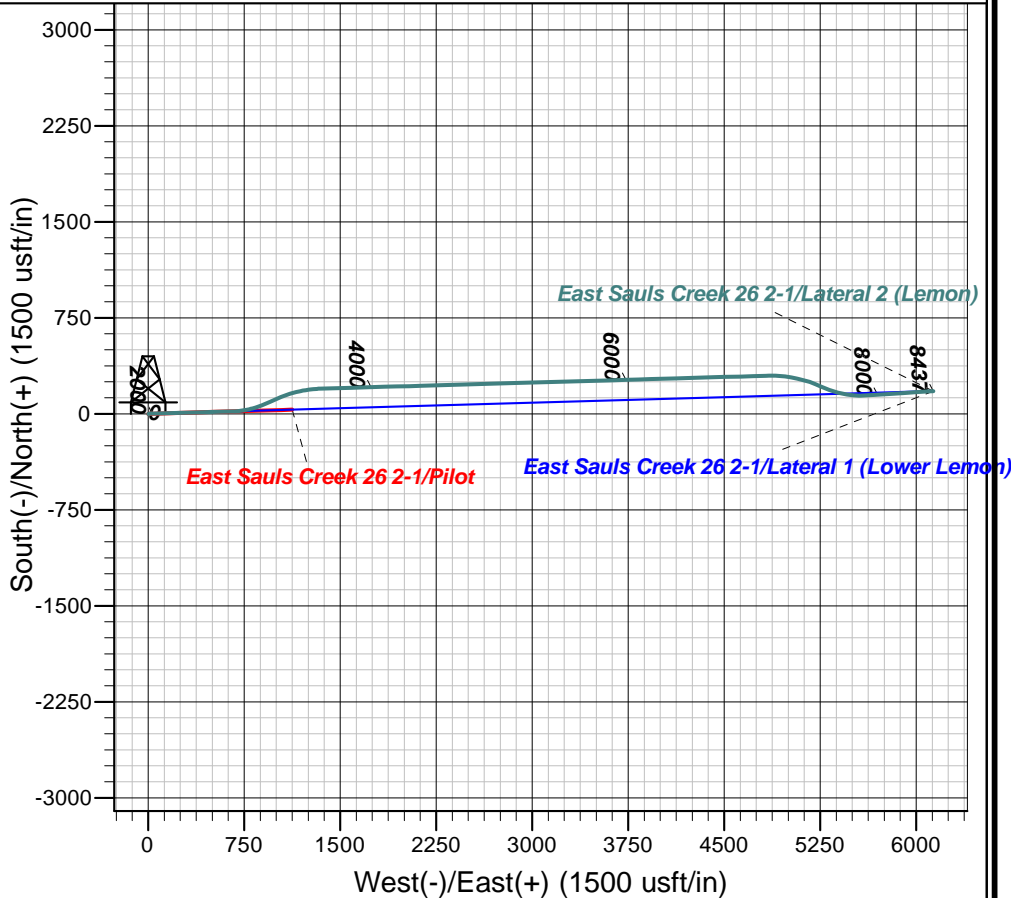


Azimuths to Grid North
True North: 1.23°
Magnetic North: 10.62°
Magnetic Field
Strength: 50315.0snT
Dip Angle: 63.78°
Date: 11/16/2016
Model: HDGM



TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
ESC 26 2-1 Lat 2 PBHL	3132.00	177.25	6132.28	1225342.94	2420749.45	37.2685843	-107.4907005





B.P.

**La Plata County, CO NAD83
East Sauls Creek Pad
East Sauls Creek 26 2-1**

Lateral 2 (Lemon)

Plan: Plan #1

Standard Planning Report

28 November, 2016





Database:	Grand Junction District	Local Co-ordinate Reference:	Well East Sauls Creek 26 2-1
Company:	B.P.	TVD Reference:	GL 7466' & RKB 11' @ 7477.00usft (Aztec 507)
Project:	La Plata County, CO NAD83	MD Reference:	GL 7466' & RKB 11' @ 7477.00usft (Aztec 507)
Site:	East Sauls Creek Pad	North Reference:	Grid
Well:	East Sauls Creek 26 2-1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 2 (Lemon)		
Design:	Plan #1		

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		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 26 2-1					
Well Position	+N/-S	-2,640.76 usft	Northing:	1,225,165.69 usft	Latitude:	37.2677368
	+E/-W	-95.07 usft	Easting:	2,414,617.17 usft	Longitude:	-107.5117557
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	7,466.00 usft

Wellbore	Lateral 2 (Lemon)				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	11/16/2016	9.38	63.78	50,315

Design	Plan #1				
Audit Notes:					
Version:	Phase:	PLAN		Tie On Depth:	2,878.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	88.34	

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
2,878.00	65.00	88.34	2,555.53	19.21	662.93	0.00	0.00	0.00	0.00	
3,175.13	84.55	65.00	2,634.19	87.14	937.74	10.00	6.58	-7.86	-52.72	
3,225.13	84.55	65.00	2,638.94	108.18	982.85	0.00	0.00	0.00	0.00	
3,612.34	84.55	88.34	2,676.23	196.43	1,355.29	6.00	0.00	6.03	91.12	
7,112.34	84.55	88.34	3,008.65	297.36	4,838.01	0.00	0.00	0.00	0.00	
7,554.63	84.55	115.00	3,051.43	209.12	5,265.25	6.00	0.00	6.03	91.29	
7,911.09	84.86	86.36	3,085.00	144.05	5,610.35	8.00	0.09	-8.03	-90.73	
8,436.18	84.86	86.36	3,132.00	177.25	6,132.28	0.00	0.00	0.00	0.00	ESC 26 2-1 Lat 2 PBI



Database:	Grand Junction District	Local Co-ordinate Reference:	Well East Sauls Creek 26 2-1
Company:	B.P.	TVD Reference:	GL 7466' & RKB 11' @ 7477.00usft (Aztec 507)
Project:	La Plata County, CO NAD83	MD Reference:	GL 7466' & RKB 11' @ 7477.00usft (Aztec 507)
Site:	East Sauls Creek Pad	North Reference:	Grid
Well:	East Sauls Creek 26 2-1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 2 (Lemon)		
Design:	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)
2,878.00	65.00	88.34	2,555.53	19.21	662.93	663.21	0.00	0.00	0.00
2,900.00	66.34	86.43	2,564.59	20.13	682.95	683.25	10.00	6.11	-8.69
3,000.00	72.72	78.20	2,599.59	32.78	775.63	776.25	10.00	6.37	-8.23
3,100.00	79.40	70.53	2,623.70	58.99	868.94	870.28	10.00	6.69	-7.67
3,175.13	84.55	65.00	2,634.19	87.14	937.74	939.86	10.00	6.85	-7.36
3,200.00	84.55	65.00	2,636.56	97.61	960.18	962.60	0.00	0.00	0.00
3,225.13	84.55	65.00	2,638.94	108.18	982.85	985.56	0.00	0.00	0.00
3,300.00	84.48	69.51	2,646.10	136.99	1,051.57	1,055.09	6.00	-0.10	6.03
3,400.00	84.44	75.54	2,655.77	166.86	1,146.46	1,150.80	6.00	-0.04	6.03
3,500.00	84.46	81.57	2,665.46	186.60	1,243.97	1,248.84	6.00	0.02	6.03
3,600.00	84.54	87.60	2,675.06	195.99	1,343.01	1,348.12	6.00	0.08	6.03
3,612.34	84.55	88.34	2,676.23	196.43	1,355.29	1,360.40	6.00	0.11	6.03
3,700.00	84.55	88.34	2,684.56	198.96	1,442.52	1,447.66	0.00	0.00	0.00
3,800.00	84.55	88.34	2,694.05	201.84	1,542.02	1,547.21	0.00	0.00	0.00
3,900.00	84.55	88.34	2,703.55	204.72	1,641.53	1,646.76	0.00	0.00	0.00
4,000.00	84.55	88.34	2,713.05	207.61	1,741.04	1,746.31	0.00	0.00	0.00
4,100.00	84.55	88.34	2,722.55	210.49	1,840.54	1,845.86	0.00	0.00	0.00
4,200.00	84.55	88.34	2,732.04	213.37	1,940.05	1,945.40	0.00	0.00	0.00
4,300.00	84.55	88.34	2,741.54	216.26	2,039.55	2,044.95	0.00	0.00	0.00
4,400.00	84.55	88.34	2,751.04	219.14	2,139.06	2,144.50	0.00	0.00	0.00
4,500.00	84.55	88.34	2,760.54	222.02	2,238.57	2,244.05	0.00	0.00	0.00
4,600.00	84.55	88.34	2,770.04	224.91	2,338.07	2,343.60	0.00	0.00	0.00
4,700.00	84.55	88.34	2,779.53	227.79	2,437.58	2,443.14	0.00	0.00	0.00
4,800.00	84.55	88.34	2,789.03	230.68	2,537.09	2,542.69	0.00	0.00	0.00
4,900.00	84.55	88.34	2,798.53	233.56	2,636.59	2,642.24	0.00	0.00	0.00
5,000.00	84.55	88.34	2,808.03	236.44	2,736.10	2,741.79	0.00	0.00	0.00
5,100.00	84.55	88.34	2,817.52	239.33	2,835.60	2,841.34	0.00	0.00	0.00
5,200.00	84.55	88.34	2,827.02	242.21	2,935.11	2,940.88	0.00	0.00	0.00
5,300.00	84.55	88.34	2,836.52	245.09	3,034.62	3,040.43	0.00	0.00	0.00
5,400.00	84.55	88.34	2,846.02	247.98	3,134.12	3,139.98	0.00	0.00	0.00
5,500.00	84.55	88.34	2,855.52	250.86	3,233.63	3,239.53	0.00	0.00	0.00
5,600.00	84.55	88.34	2,865.01	253.75	3,333.13	3,339.08	0.00	0.00	0.00
5,700.00	84.55	88.34	2,874.51	256.63	3,432.64	3,438.62	0.00	0.00	0.00
5,800.00	84.55	88.34	2,884.01	259.51	3,532.15	3,538.17	0.00	0.00	0.00
5,900.00	84.55	88.34	2,893.51	262.40	3,631.65	3,637.72	0.00	0.00	0.00
6,000.00	84.55	88.34	2,903.00	265.28	3,731.16	3,737.27	0.00	0.00	0.00
6,100.00	84.55	88.34	2,912.50	268.16	3,830.67	3,836.82	0.00	0.00	0.00
6,200.00	84.55	88.34	2,922.00	271.05	3,930.17	3,936.36	0.00	0.00	0.00
6,300.00	84.55	88.34	2,931.50	273.93	4,029.68	4,035.91	0.00	0.00	0.00
6,400.00	84.55	88.34	2,940.99	276.82	4,129.18	4,135.46	0.00	0.00	0.00
6,500.00	84.55	88.34	2,950.49	279.70	4,228.69	4,235.01	0.00	0.00	0.00
6,600.00	84.55	88.34	2,959.99	282.58	4,328.20	4,334.55	0.00	0.00	0.00
6,700.00	84.55	88.34	2,969.49	285.47	4,427.70	4,434.10	0.00	0.00	0.00
6,800.00	84.55	88.34	2,978.99	288.35	4,527.21	4,533.65	0.00	0.00	0.00
6,900.00	84.55	88.34	2,988.48	291.23	4,626.72	4,633.20	0.00	0.00	0.00
7,000.00	84.55	88.34	2,997.98	294.12	4,726.22	4,732.75	0.00	0.00	0.00
7,100.00	84.55	88.34	3,007.48	297.00	4,825.73	4,832.29	0.00	0.00	0.00
7,112.34	84.55	88.34	3,008.65	297.36	4,838.01	4,844.58	0.00	0.00	0.00
7,200.00	84.45	93.62	3,017.05	295.86	4,925.22	4,931.71	6.00	-0.11	6.03
7,300.00	84.40	99.65	3,026.77	284.37	5,024.03	5,030.15	6.00	-0.05	6.03
7,400.00	84.41	105.68	3,036.52	262.56	5,121.09	5,126.54	6.00	0.01	6.03
7,500.00	84.49	111.71	3,046.20	230.67	5,215.33	5,219.81	6.00	0.07	6.03



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Project:	La Plata County, CO NAD83	MD Reference:	GL 7466' & RKB 11' @ 7477.00usft (Aztec 507)
Site:	East Sauls Creek Pad	North Reference:	Grid
Well:	East Sauls Creek 26 2-1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 2 (Lemon)		
Design:	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)
7,554.63	84.55	115.00	3,051.43	209.12	5,265.25	5,269.09	6.00	0.12	6.03
7,600.00	84.51	111.35	3,055.75	191.34	5,306.76	5,310.07	8.00	-0.08	-8.04
7,700.00	84.52	103.32	3,065.32	161.71	5,401.70	5,404.11	8.00	0.00	-8.04
7,800.00	84.62	95.28	3,074.80	145.64	5,499.86	5,501.77	8.00	0.11	-8.04
7,900.00	84.83	87.25	3,084.01	143.44	5,599.33	5,601.13	8.00	0.21	-8.03
7,911.09	84.86	86.36	3,085.00	144.05	5,610.35	5,612.17	8.00	0.27	-8.03
8,000.00	84.86	86.36	3,092.96	149.67	5,698.73	5,700.68	0.00	0.00	0.00
8,100.00	84.86	86.36	3,101.91	156.00	5,798.13	5,800.21	0.00	0.00	0.00
8,200.00	84.86	86.36	3,110.86	162.32	5,897.53	5,899.75	0.00	0.00	0.00
8,300.00	84.86	86.36	3,119.81	168.64	5,996.92	5,999.29	0.00	0.00	0.00
8,400.00	84.86	86.36	3,128.76	174.96	6,096.32	6,098.83	0.00	0.00	0.00
8,436.18	84.86	86.36	3,132.00	177.25	6,132.28	6,134.84	0.00	0.00	0.00
ESC 26 2-1 Lat 2 PBHL									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
ESC 26 2-1 Lat 2 PBHL - plan hits target center - Point	0.00	0.00	3,132.00	177.25	6,132.28	1,225,342.94	2,420,749.45	37.2685842	-107.4907006