



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

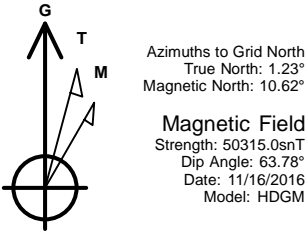


Plan: Plan #1 (East Sauls Creek 26 2-2/Lateral 1 (Drainage))

Created By: Janie Collins Date: 16:08, November 30 2016

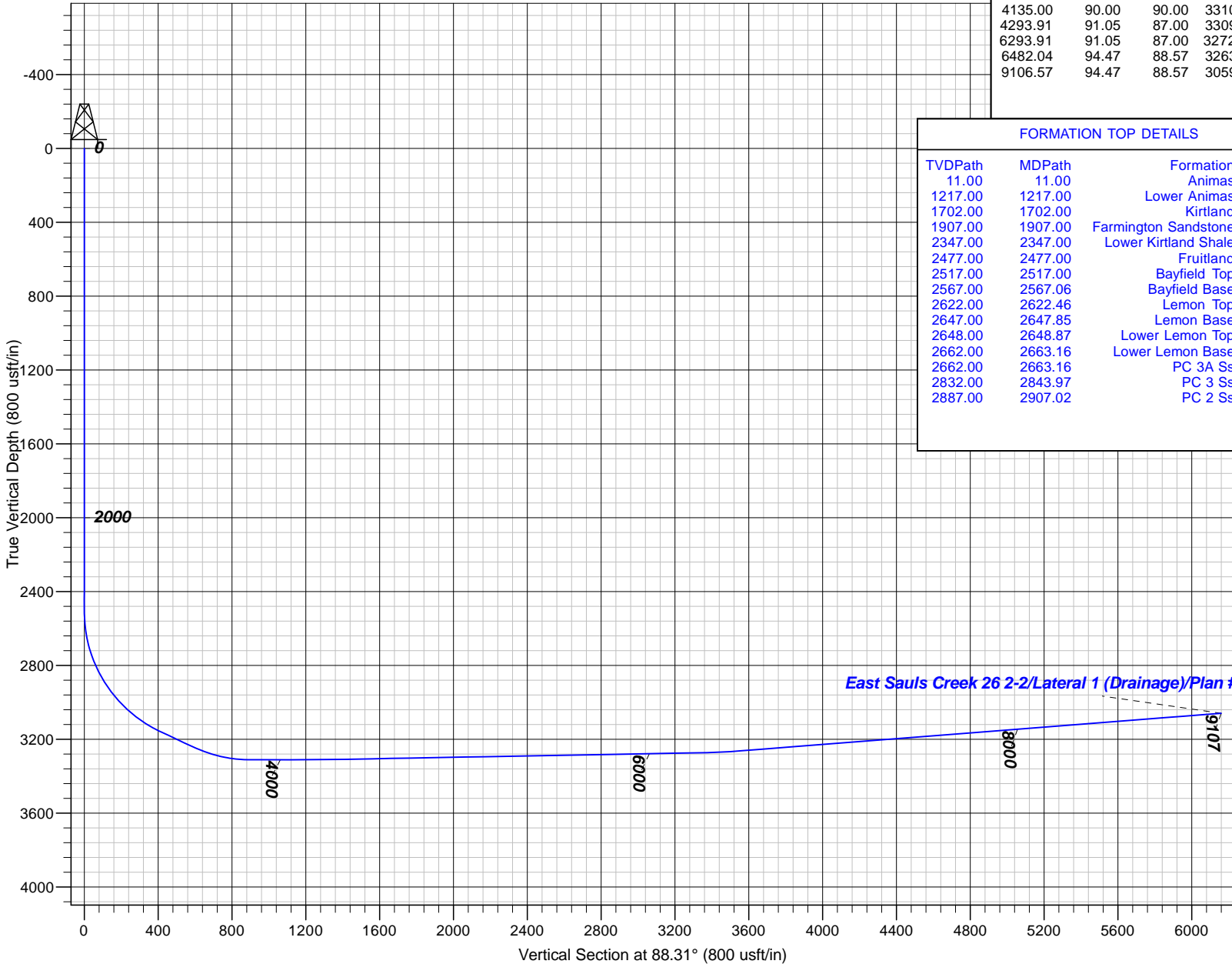
WELL DETAILS: East Sauls Creek 26 2-2

SECTION DETAILS



GL 7466' & RKB 11' @ 7477.00usft (Aztec 507) 7466.00				
Northing	Easting	Latitude	Longitude	Slot
1225111.60	2414591.20	37.2675868	-107.5118409	

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2510.00	0.00	0.00	2510.00	0.00	0.00	0.00	0.00	0.00	
3322.50	65.00	90.00	3159.10	0.00	413.52	8.00	90.00	413.34	
3522.50	65.00	90.00	3243.62	0.00	594.78	0.00	0.00	594.52	
3835.00	90.00	90.00	3310.72	0.00	897.46	8.00	0.00	897.07	
4135.00	90.00	90.00	3310.72	0.00	1197.46	0.00	0.00	1196.94	
4293.91	91.05	87.00	3309.26	4.16	1356.29	2.00	-70.70	1355.83	
6293.91	91.05	87.00	3272.61	108.81	3353.22	0.00	0.00	3354.97	
6482.04	94.47	88.57	3263.56	116.08	3540.95	2.00	24.60	3542.84	
9106.57	94.47	88.57	3059.00	181.36	6156.68	0.00	0.00	6159.35	ESC 26 2-2 Lat 1 PBHL

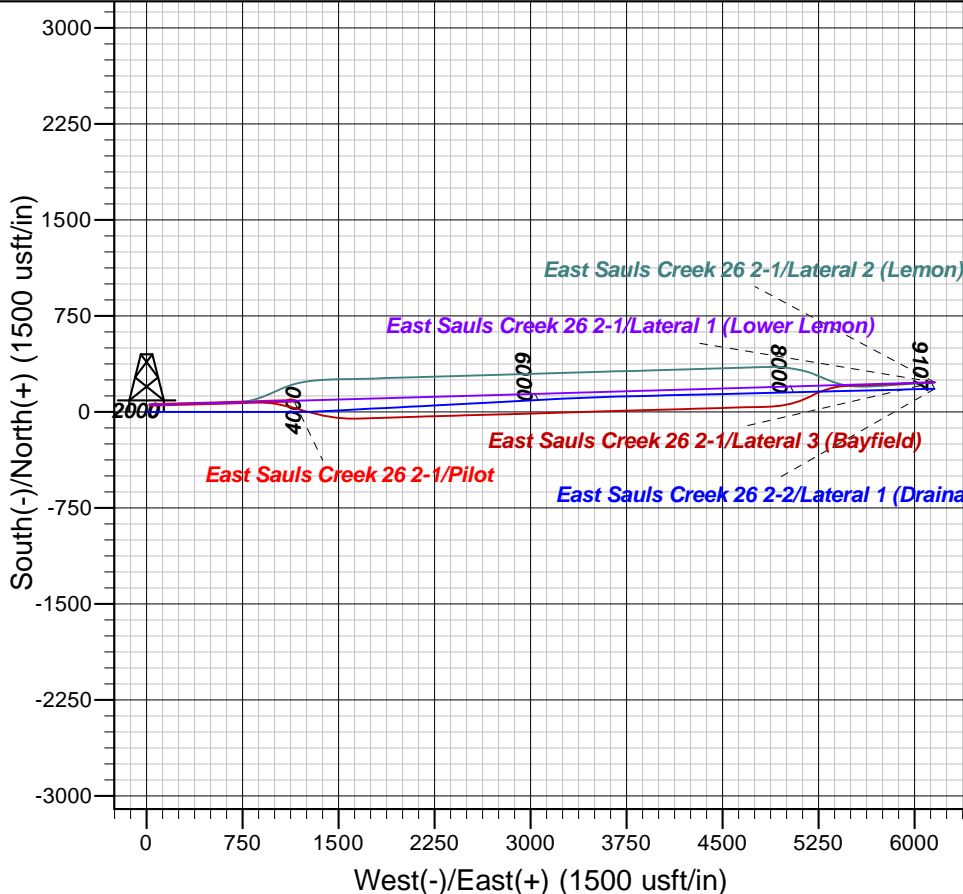


FORMATION TOP DETAILS

TVDPath	MDPath	Formation
11.00	11.00	Animas
1217.00	1217.00	Lower Animas
1702.00	1702.00	Kirtland
1907.00	1907.00	Farmington Sandstone
2347.00	2347.00	Lower Kirtland Shale
2477.00	2477.00	Fruitland
2517.00	2517.00	Bayfield Top
2567.00	2567.06	Bayfield Base
2622.00	2622.46	Lemon Top
2647.00	2647.85	Lemon Base
2648.00	2648.87	Lower Lemon Top
2662.00	2663.16	Lower Lemon Base
2662.00	2663.16	PC 3A Ss
2832.00	2843.97	PC 3 Ss
2887.00	2907.02	PC 2 Ss

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
ESC 26 2-2 Lat 1 PBHL	3059.00	181.36	6156.68	1225292.96	2420747.88	37.2684470	-107.4907023





B.P.

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

Lateral 1 (Drainage)

Plan: Plan #1

Standard Planning Report

30 November, 2016





Database:	Grand Junction District	Local Co-ordinate Reference:	Well East Sauls Creek 26 2-2
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 2-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 1 (Drainage)		
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 2-2					
Well Position	+N/-S	-2,694.85 usft	Northing:	1,225,111.60 usft	Latitude:	37.2675867
	+E/-W	-121.04 usft	Easting:	2,414,591.20 usft	Longitude:	-107.5118409
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	7,466.00 usft

Wellbore	Lateral 1 (Drainage)				
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:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	88.31

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	
2,510.00	0.00	0.00	2,510.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,322.50	65.00	90.00	3,159.10	0.00	413.52	8.00	8.00	0.00	90.00	
3,522.50	65.00	90.00	3,243.62	0.00	594.78	0.00	0.00	0.00	0.00	
3,835.00	90.00	90.00	3,310.72	0.00	897.46	8.00	8.00	0.00	0.00	
4,135.00	90.00	90.00	3,310.72	0.00	1,197.46	0.00	0.00	0.00	0.00	
4,293.91	91.05	87.00	3,309.26	4.16	1,356.29	2.00	0.66	-1.89	-70.70	
6,293.91	91.05	87.00	3,272.61	108.81	3,353.22	0.00	0.00	0.00	0.00	
6,482.04	94.47	88.57	3,263.56	116.08	3,540.95	2.00	1.82	0.83	24.60	
9,106.57	94.47	88.57	3,059.00	181.36	6,156.68	0.00	0.00	0.00	0.00	ESC 26 2-2 Lat 1 PBT



Database:	Grand Junction District	Local Co-ordinate Reference:	Well East Sauls Creek 26 2-2
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 2-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 1 (Drainage)		
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)
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
Animas									
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
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,217.00	0.00	0.00	1,217.00	0.00	0.00	0.00	0.00	0.00	0.00
Lower Animas									
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
1,600.00	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
1,702.00	0.00	0.00	1,702.00	0.00	0.00	0.00	0.00	0.00	0.00
Kirtland									
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,907.00	0.00	0.00	1,907.00	0.00	0.00	0.00	0.00	0.00	0.00
Farmington Sandstone									
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,347.00	0.00	0.00	2,347.00	0.00	0.00	0.00	0.00	0.00	0.00
Lower Kirtland Shale									
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,477.00	0.00	0.00	2,477.00	0.00	0.00	0.00	0.00	0.00	0.00
Fruitland									
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,510.00	0.00	0.00	2,510.00	0.00	0.00	0.00	0.00	0.00	0.00
2,517.00	0.56	90.00	2,517.00	0.00	0.03	0.03	8.00	8.00	0.00
Bayfield Top									
2,567.06	4.56	90.00	2,567.00	0.00	2.27	2.27	8.00	8.00	0.00
Bayfield Base									
2,600.00	7.20	90.00	2,599.76	0.00	5.65	5.64	8.00	8.00	0.00
2,622.46	9.00	90.00	2,622.00	0.00	8.81	8.81	8.00	8.00	0.00
Lemon Top									
2,647.85	11.03	90.00	2,647.00	0.00	13.23	13.22	8.00	8.00	0.00
Lemon Base									
2,648.87	11.11	90.00	2,648.00	0.00	13.42	13.42	8.00	8.00	0.00
Lower Lemon Top									
2,663.16	12.25	90.00	2,662.00	0.00	16.32	16.31	8.00	8.00	0.00



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Site:	East Sauls Creek Pad	North Reference:	Grid
Well:	East Sauls Creek 26 2-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 1 (Drainage)		
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)
Lower Lemon Base - PC 3A Ss									
2,700.00	15.20	90.00	2,697.78	0.00	25.06	25.04	8.00	8.00	0.00
2,800.00	23.20	90.00	2,792.14	0.00	57.92	57.89	8.00	8.00	0.00
2,843.97	26.72	90.00	2,832.00	0.00	76.47	76.43	8.00	8.00	0.00
PC 3 Ss									
2,900.00	31.20	90.00	2,881.01	0.00	103.59	103.54	8.00	8.00	0.00
2,907.02	31.76	90.00	2,887.00	0.00	107.26	107.21	8.00	8.00	0.00
PC 2 Ss									
3,000.00	39.20	90.00	2,962.66	0.00	161.18	161.11	8.00	8.00	0.00
3,100.00	47.20	90.00	3,035.50	0.00	229.58	229.48	8.00	8.00	0.00
3,200.00	55.20	90.00	3,098.10	0.00	307.45	307.32	8.00	8.00	0.00
3,300.00	63.20	90.00	3,149.27	0.00	393.28	393.11	8.00	8.00	0.00
3,322.50	65.00	90.00	3,159.10	0.00	413.52	413.34	8.00	8.00	0.00
3,400.00	65.00	90.00	3,191.85	0.00	483.76	483.55	0.00	0.00	0.00
3,500.00	65.00	90.00	3,234.11	0.00	574.39	574.14	0.00	0.00	0.00
3,522.50	65.00	90.00	3,243.62	0.00	594.78	594.52	0.00	0.00	0.00
3,600.00	71.20	90.00	3,272.51	0.00	666.65	666.36	8.00	8.00	0.00
3,700.00	79.20	90.00	3,298.04	0.00	763.26	762.93	8.00	8.00	0.00
3,800.00	87.20	90.00	3,309.87	0.00	862.47	862.10	8.00	8.00	0.00
3,835.00	90.00	90.00	3,310.72	0.00	897.46	897.07	8.00	8.00	0.00
3,900.00	90.00	90.00	3,310.72	0.00	962.46	962.04	0.00	0.00	0.00
4,000.00	90.00	90.00	3,310.72	0.00	1,062.46	1,062.00	0.00	0.00	0.00
4,100.00	90.00	90.00	3,310.72	0.00	1,162.46	1,161.95	0.00	0.00	0.00
4,135.00	90.00	90.00	3,310.72	0.00	1,197.46	1,196.94	0.00	0.00	0.00
4,200.00	90.43	88.77	3,310.48	0.70	1,262.45	1,261.93	2.00	0.66	-1.89
4,293.91	91.05	87.00	3,309.26	4.16	1,356.29	1,355.83	2.00	0.66	-1.89
4,300.00	91.05	87.00	3,309.15	4.48	1,362.37	1,361.91	0.00	0.00	0.00
4,400.00	91.05	87.00	3,307.32	9.71	1,462.21	1,461.87	0.00	0.00	0.00
4,500.00	91.05	87.00	3,305.49	14.94	1,562.06	1,561.82	0.00	0.00	0.00
4,600.00	91.05	87.00	3,303.66	20.18	1,661.91	1,661.78	0.00	0.00	0.00
4,700.00	91.05	87.00	3,301.82	25.41	1,761.75	1,761.74	0.00	0.00	0.00
4,800.00	91.05	87.00	3,299.99	30.64	1,861.60	1,861.69	0.00	0.00	0.00
4,900.00	91.05	87.00	3,298.16	35.87	1,961.45	1,961.65	0.00	0.00	0.00
5,000.00	91.05	87.00	3,296.33	41.11	2,061.29	2,061.61	0.00	0.00	0.00
5,100.00	91.05	87.00	3,294.49	46.34	2,161.14	2,161.56	0.00	0.00	0.00
5,200.00	91.05	87.00	3,292.66	51.57	2,260.98	2,261.52	0.00	0.00	0.00
5,300.00	91.05	87.00	3,290.83	56.80	2,360.83	2,361.48	0.00	0.00	0.00
5,400.00	91.05	87.00	3,289.00	62.04	2,460.68	2,461.44	0.00	0.00	0.00
5,500.00	91.05	87.00	3,287.16	67.27	2,560.52	2,561.39	0.00	0.00	0.00
5,600.00	91.05	87.00	3,285.33	72.50	2,660.37	2,661.35	0.00	0.00	0.00
5,700.00	91.05	87.00	3,283.50	77.74	2,760.21	2,761.31	0.00	0.00	0.00
5,800.00	91.05	87.00	3,281.67	82.97	2,860.06	2,861.26	0.00	0.00	0.00
5,900.00	91.05	87.00	3,279.83	88.20	2,959.91	2,961.22	0.00	0.00	0.00
6,000.00	91.05	87.00	3,278.00	93.43	3,059.75	3,061.18	0.00	0.00	0.00
6,100.00	91.05	87.00	3,276.17	98.67	3,159.60	3,161.13	0.00	0.00	0.00
6,200.00	91.05	87.00	3,274.34	103.90	3,259.45	3,261.09	0.00	0.00	0.00
6,293.91	91.05	87.00	3,272.61	108.81	3,353.22	3,354.97	0.00	0.00	0.00
6,300.00	91.16	87.05	3,272.50	109.13	3,359.29	3,361.05	2.00	1.82	0.83
6,400.00	92.98	87.88	3,268.89	113.54	3,459.12	3,460.97	2.00	1.82	0.83
6,482.04	94.47	88.57	3,263.56	116.08	3,540.95	3,542.84	2.00	1.82	0.84
6,500.00	94.47	88.57	3,262.16	116.52	3,558.85	3,560.74	0.00	0.00	0.00



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Well:	East Sauls Creek 26 2-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 1 (Drainage)		
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)
6,600.00	94.47	88.57	3,254.36	119.01	3,658.51	3,660.43	0.00	0.00	0.00
6,700.00	94.47	88.57	3,246.57	121.50	3,758.18	3,760.13	0.00	0.00	0.00
6,800.00	94.47	88.57	3,238.77	123.99	3,857.84	3,859.82	0.00	0.00	0.00
6,900.00	94.47	88.57	3,230.98	126.47	3,957.51	3,959.52	0.00	0.00	0.00
7,000.00	94.47	88.57	3,223.19	128.96	4,057.17	4,059.21	0.00	0.00	0.00
7,100.00	94.47	88.57	3,215.39	131.45	4,156.84	4,158.91	0.00	0.00	0.00
7,200.00	94.47	88.57	3,207.60	133.94	4,256.50	4,258.60	0.00	0.00	0.00
7,300.00	94.47	88.57	3,199.80	136.42	4,356.17	4,358.29	0.00	0.00	0.00
7,400.00	94.47	88.57	3,192.01	138.91	4,455.83	4,457.99	0.00	0.00	0.00
7,500.00	94.47	88.57	3,184.22	141.40	4,555.50	4,557.68	0.00	0.00	0.00
7,600.00	94.47	88.57	3,176.42	143.89	4,655.16	4,657.38	0.00	0.00	0.00
7,700.00	94.47	88.57	3,168.63	146.37	4,754.83	4,757.07	0.00	0.00	0.00
7,800.00	94.47	88.57	3,160.83	148.86	4,854.49	4,856.77	0.00	0.00	0.00
7,900.00	94.47	88.57	3,153.04	151.35	4,954.16	4,956.46	0.00	0.00	0.00
8,000.00	94.47	88.57	3,145.25	153.84	5,053.82	5,056.16	0.00	0.00	0.00
8,100.00	94.47	88.57	3,137.45	156.32	5,153.48	5,155.85	0.00	0.00	0.00
8,200.00	94.47	88.57	3,129.66	158.81	5,253.15	5,255.55	0.00	0.00	0.00
8,300.00	94.47	88.57	3,121.86	161.30	5,352.81	5,355.24	0.00	0.00	0.00
8,400.00	94.47	88.57	3,114.07	163.78	5,452.48	5,454.94	0.00	0.00	0.00
8,500.00	94.47	88.57	3,106.28	166.27	5,552.14	5,554.63	0.00	0.00	0.00
8,600.00	94.47	88.57	3,098.48	168.76	5,651.81	5,654.33	0.00	0.00	0.00
8,700.00	94.47	88.57	3,090.69	171.25	5,751.47	5,754.02	0.00	0.00	0.00
8,800.00	94.47	88.57	3,082.89	173.73	5,851.14	5,853.72	0.00	0.00	0.00
8,900.00	94.47	88.57	3,075.10	176.22	5,950.80	5,953.41	0.00	0.00	0.00
9,000.00	94.47	88.57	3,067.31	178.71	6,050.47	6,053.11	0.00	0.00	0.00
9,100.00	94.47	88.57	3,059.51	181.20	6,150.13	6,152.80	0.00	0.00	0.00
9,106.57	94.47	88.57	3,059.00	181.36	6,156.68	6,159.35	0.00	0.00	0.00
ESC 26 2-2 Lat 1 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 2-2 Lat 1 PBHL - plan hits target center - Point	0.00	0.00	3,059.00	181.36	6,156.68	1,225,292.96	2,420,747.88	37.2684469	-107.4907023



Database:	Grand Junction District	Local Co-ordinate Reference:	Well East Sauls Creek 26 2-2
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 2-2	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 1 (Drainage)		
Design:	Plan #1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
11.00	11.00	Animas		0.00	360.00	
1,217.00	1,217.00	Lower Animas		0.00	360.00	
1,702.00	1,702.00	Kirtland		0.00	360.00	
1,907.00	1,907.00	Farmington Sandstone		0.00	360.00	
2,347.00	2,347.00	Lower Kirtland Shale		0.00	360.00	
2,477.00	2,477.00	Fruitland		0.00	360.00	
2,517.00	2,517.00	Bayfield Top		0.00	360.00	
2,567.06	2,567.00	Bayfield Base		0.00	360.00	
2,622.46	2,622.00	Lemon Top		0.00	360.00	
2,647.85	2,647.00	Lemon Base		0.00	360.00	
2,648.87	2,648.00	Lower Lemon Top		0.00	360.00	
2,663.16	2,662.00	Lower Lemon Base		0.00	360.00	
2,663.16	2,662.00	PC 3A Ss		0.00	360.00	
2,843.97	2,832.00	PC 3 Ss		0.00	360.00	
2,907.02	2,887.00	PC 2 Ss		0.00	360.00	