



Company: B.P.
Project: La Plata County, CO NAD83
Site: East Sauls Creek Pad
Well: East Sauls Creek 35 3-1
Wellbore: Lateral 3 (Bayfield)
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 35 3-1/Lateral 3 (Bayfield))

Created By: Janie Collins Date: 11:34, December 05 2016

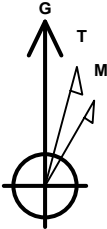
WELL DETAILS: East Sauls Creek 35 3-1

+N/-S +E/-W GL 7326' & RKB 11' @ 7337.00usft (Aztec 507) 7326.00
Northing Easting Latitude Longitude Slot
0.00 0.00 1222360.08 2414796.92 37.2600439 -107.5109306

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
2500.00	59.05	87.83	2376.11	13.17	347.59	0.00	0.00	347.84	
2740.52	83.10	87.83	2453.55	21.72	573.28	10.00	0.00	573.69	
3081.41	83.10	105.00	2494.81	-15.94	908.29	5.00	91.04	907.04	
3281.41	83.10	105.00	2518.84	-67.33	1100.08	0.00	0.00	1096.73	
3622.31	83.10	87.83	2560.09	-105.00	1435.09	5.00	-91.04	1430.08	
6872.31	83.10	87.83	2950.54	17.17	4659.24	0.00	0.00	4656.54	
7335.48	83.10	64.50	3006.95	126.34	5102.55	5.00	-91.42	5103.67	
7624.97	83.10	87.83	3042.21	194.58	5379.62	8.00	91.42	5383.13	
7638.37	83.12	86.75	3043.82	195.21	5392.91	8.00	-88.79	5396.44	
8149.38	83.12	86.75	3105.00	223.97	5899.43	0.00	0.00	5903.68	

ESC 35 3-1 Lat 3 (Bayfield) PBHL



Azimuths to Grid North
True North: 1.23°
Magnetic North: 10.60°

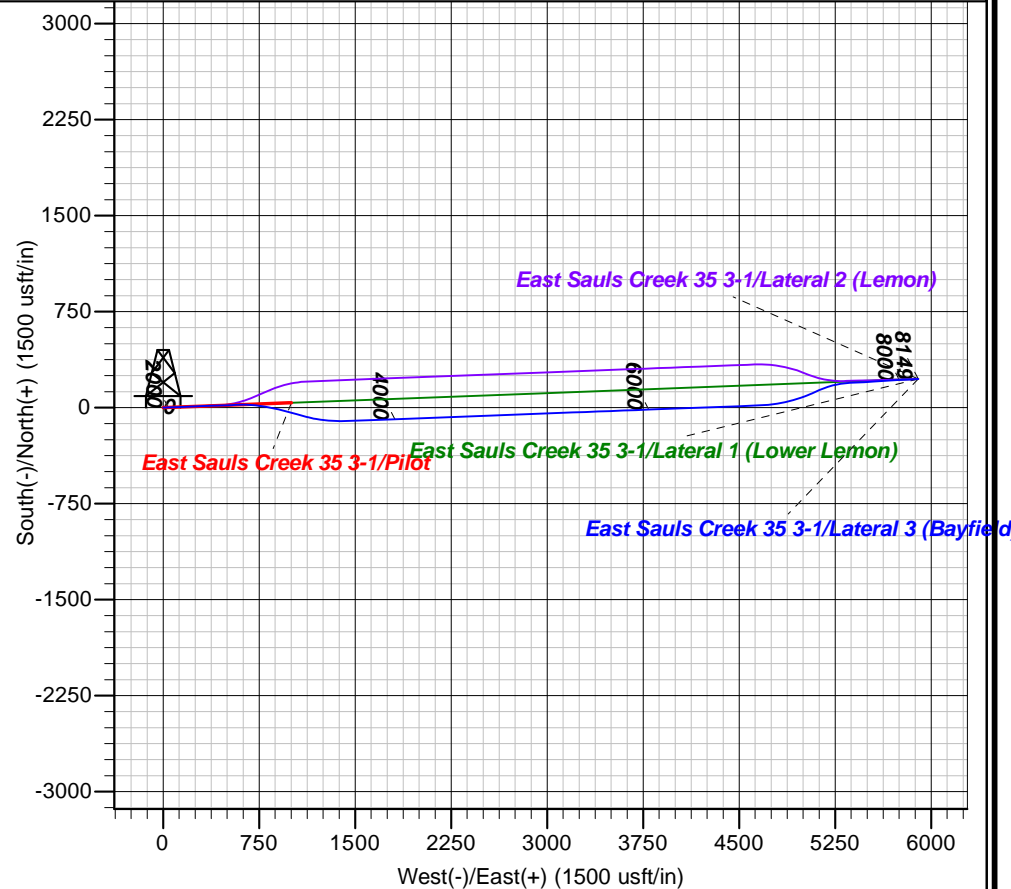
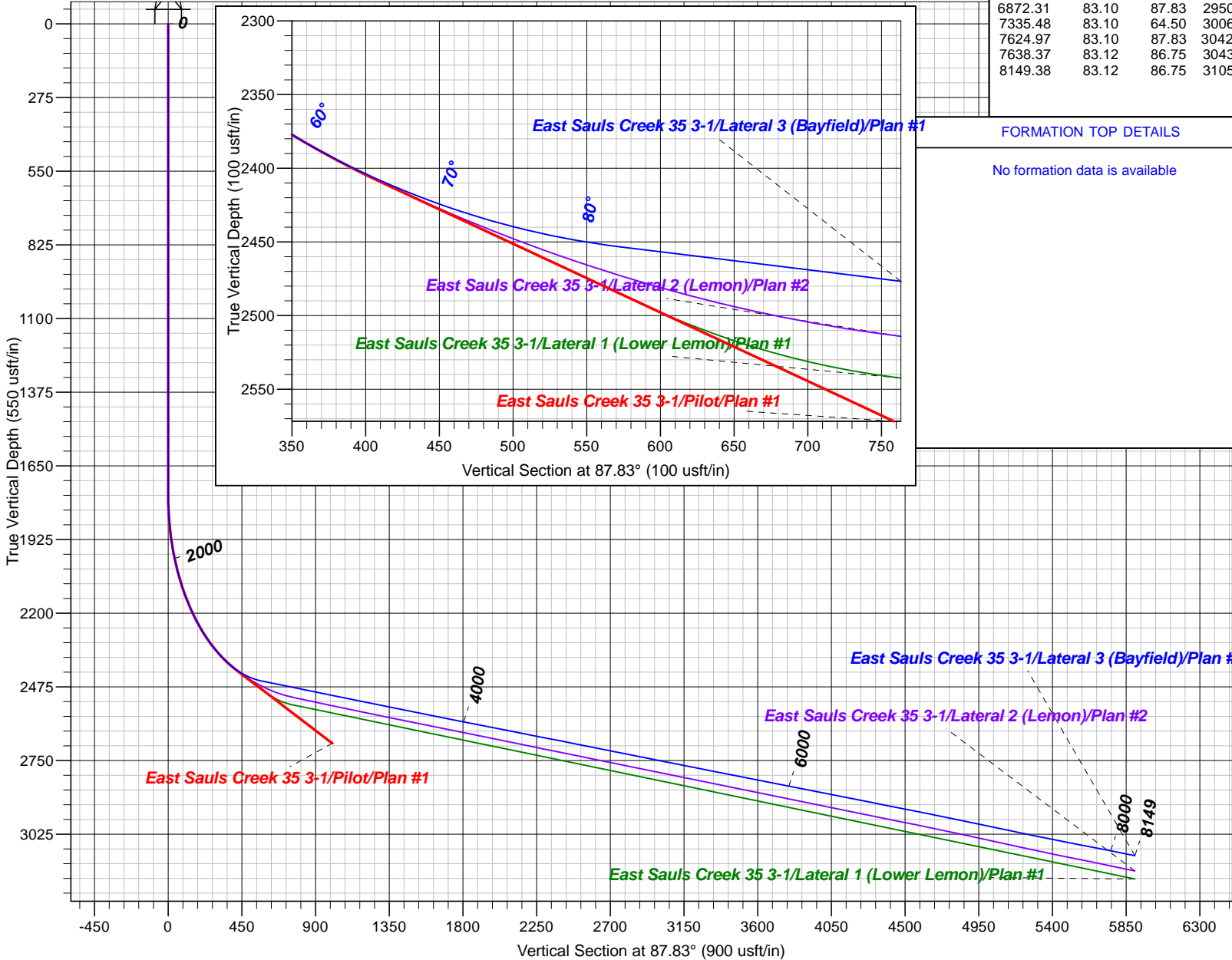
Magnetic Field
Strength: 50312.1nT
Dip Angle: 63.78°
Date: 11/15/2016
Model: HDGM

FORMATION TOP DETAILS

No formation data is available

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
ESC 35 3-1 Lat 3 (Bayfield) PBHL	3105.00	223.97	5899.43	1222584.05	2420696.35	37.2610059	-107.4906810





B.P.

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

Lateral 3 (Bayfield)

Plan: Plan #1

Standard Planning Report

29 November, 2016





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

Wellbore	Lateral 3 (Bayfield)				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	11/15/2016	9.37	63.78	50,312

Design	Plan #1				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	2,500.00	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	87.83	

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
2,500.00	59.05	87.83	2,376.11	13.17	347.59	0.00	0.00	0.00	0.00	
2,740.52	83.10	87.83	2,453.55	21.72	573.28	10.00	10.00	0.00	0.00	
3,081.41	83.10	105.00	2,494.81	-15.94	908.29	5.00	0.00	5.04	91.04	
3,281.41	83.10	105.00	2,518.84	-67.33	1,100.08	0.00	0.00	0.00	0.00	
3,622.31	83.10	87.83	2,560.09	-105.00	1,435.09	5.00	0.00	-5.04	-91.04	
6,872.31	83.10	87.83	2,950.54	17.17	4,659.24	0.00	0.00	0.00	0.00	
7,335.48	83.10	64.50	3,006.95	126.34	5,102.55	5.00	0.00	-5.04	-91.42	
7,624.97	83.10	87.83	3,042.21	194.58	5,379.62	8.00	0.00	8.06	91.42	
7,638.37	83.12	86.75	3,043.82	195.21	5,392.91	8.00	0.18	-8.06	-88.79	
8,149.38	83.12	86.75	3,105.00	223.97	5,899.43	0.00	0.00	0.00	0.00	ESC 35 3-1 Lat 3 (Ba



Database:	Grand Junction District	Local Co-ordinate Reference:	Well East Sauls Creek 35 3-1
Company:	B.P.	TVD Reference:	GL 7326' & RKB 11' @ 7337.00usft (Aztec 507)
Project:	La Plata County, CO NAD83	MD Reference:	GL 7326' & RKB 11' @ 7337.00usft (Aztec 507)
Site:	East Sauls Creek Pad	North Reference:	Grid
Well:	East Sauls Creek 35 3-1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 3 (Bayfield)		
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)
2,500.00	59.05	87.83	2,376.11	13.17	347.59	347.84	0.00	0.00	0.00
2,600.00	69.05	87.83	2,419.82	16.57	437.33	437.64	10.00	10.00	0.00
2,700.00	79.05	87.83	2,447.26	20.21	533.29	533.67	10.00	10.00	0.00
2,740.52	83.10	87.83	2,453.55	21.72	573.28	573.69	10.00	10.00	0.00
2,800.00	83.06	90.83	2,460.72	22.42	632.32	632.71	5.00	-0.07	5.04
2,900.00	83.02	95.86	2,472.85	16.63	731.38	731.48	5.00	-0.03	5.04
3,000.00	83.04	100.90	2,484.98	2.16	829.55	829.03	5.00	0.02	5.04
3,081.41	83.10	105.00	2,494.81	-15.94	908.29	907.04	5.00	0.07	5.04
3,100.00	83.10	105.00	2,497.04	-20.72	926.12	924.66	0.00	0.00	0.00
3,200.00	83.10	105.00	2,509.06	-46.41	1,022.01	1,019.51	0.00	0.00	0.00
3,281.41	83.10	105.00	2,518.84	-67.33	1,100.08	1,096.73	0.00	0.00	0.00
3,300.00	83.08	104.06	2,521.07	-71.96	1,117.94	1,114.41	5.00	-0.09	-5.04
3,400.00	83.03	99.03	2,533.17	-91.82	1,215.17	1,210.81	5.00	-0.05	-5.04
3,500.00	83.03	93.99	2,545.31	-103.07	1,313.75	1,308.90	5.00	0.00	-5.04
3,600.00	83.08	88.95	2,557.41	-105.62	1,412.96	1,407.93	5.00	0.05	-5.04
3,622.31	83.10	87.83	2,560.09	-105.00	1,435.09	1,430.08	5.00	0.08	-5.04
3,700.00	83.10	87.83	2,569.43	-102.08	1,512.17	1,507.20	0.00	0.00	0.00
3,800.00	83.10	87.83	2,581.44	-98.32	1,611.37	1,606.48	0.00	0.00	0.00
3,900.00	83.10	87.83	2,593.46	-94.56	1,710.58	1,705.76	0.00	0.00	0.00
4,000.00	83.10	87.83	2,605.47	-90.80	1,809.78	1,805.03	0.00	0.00	0.00
4,100.00	83.10	87.83	2,617.48	-87.04	1,908.98	1,904.31	0.00	0.00	0.00
4,200.00	83.10	87.83	2,629.50	-83.28	2,008.19	2,003.58	0.00	0.00	0.00
4,300.00	83.10	87.83	2,641.51	-79.52	2,107.39	2,102.86	0.00	0.00	0.00
4,400.00	83.10	87.83	2,653.52	-75.77	2,206.60	2,202.14	0.00	0.00	0.00
4,500.00	83.10	87.83	2,665.54	-72.01	2,305.80	2,301.41	0.00	0.00	0.00
4,600.00	83.10	87.83	2,677.55	-68.25	2,405.01	2,400.69	0.00	0.00	0.00
4,700.00	83.10	87.83	2,689.57	-64.49	2,504.21	2,499.96	0.00	0.00	0.00
4,800.00	83.10	87.83	2,701.58	-60.73	2,603.42	2,599.24	0.00	0.00	0.00
4,900.00	83.10	87.83	2,713.59	-56.97	2,702.62	2,698.51	0.00	0.00	0.00
5,000.00	83.10	87.83	2,725.61	-53.21	2,801.83	2,797.79	0.00	0.00	0.00
5,100.00	83.10	87.83	2,737.62	-49.45	2,901.03	2,897.07	0.00	0.00	0.00
5,200.00	83.10	87.83	2,749.63	-45.69	3,000.23	2,996.34	0.00	0.00	0.00
5,300.00	83.10	87.83	2,761.65	-41.93	3,099.44	3,095.62	0.00	0.00	0.00
5,400.00	83.10	87.83	2,773.66	-38.18	3,198.64	3,194.89	0.00	0.00	0.00
5,500.00	83.10	87.83	2,785.67	-34.42	3,297.85	3,294.17	0.00	0.00	0.00
5,600.00	83.10	87.83	2,797.69	-30.66	3,397.05	3,393.44	0.00	0.00	0.00
5,700.00	83.10	87.83	2,809.70	-26.90	3,496.26	3,492.72	0.00	0.00	0.00
5,800.00	83.10	87.83	2,821.72	-23.14	3,595.46	3,592.00	0.00	0.00	0.00
5,900.00	83.10	87.83	2,833.73	-19.38	3,694.67	3,691.27	0.00	0.00	0.00
6,000.00	83.10	87.83	2,845.74	-15.62	3,793.87	3,790.55	0.00	0.00	0.00
6,100.00	83.10	87.83	2,857.76	-11.86	3,893.08	3,889.82	0.00	0.00	0.00
6,200.00	83.10	87.83	2,869.77	-8.10	3,992.28	3,989.10	0.00	0.00	0.00
6,300.00	83.10	87.83	2,881.78	-4.34	4,091.48	4,088.37	0.00	0.00	0.00
6,400.00	83.10	87.83	2,893.80	-0.58	4,190.69	4,187.65	0.00	0.00	0.00
6,500.00	83.10	87.83	2,905.81	3.17	4,289.89	4,286.93	0.00	0.00	0.00
6,600.00	83.10	87.83	2,917.83	6.93	4,389.10	4,386.20	0.00	0.00	0.00
6,700.00	83.10	87.83	2,929.84	10.69	4,488.30	4,485.48	0.00	0.00	0.00
6,800.00	83.10	87.83	2,941.85	14.45	4,587.51	4,584.75	0.00	0.00	0.00
6,872.31	83.10	87.83	2,950.54	17.17	4,659.24	4,656.54	0.00	0.00	0.00
6,900.00	83.07	86.44	2,953.87	18.54	4,686.70	4,684.02	5.00	-0.12	-5.04
7,000.00	82.99	81.40	2,966.02	29.06	4,785.36	4,783.02	5.00	-0.08	-5.04
7,100.00	82.96	76.36	2,978.27	48.19	4,882.72	4,881.03	5.00	-0.03	-5.04



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Project:	La Plata County, CO NAD83	MD Reference:	GL 7326' & RKB 11' @ 7337.00usft (Aztec 507)
Site:	East Sauls Creek Pad	North Reference:	Grid
Well:	East Sauls Creek 35 3-1	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 3 (Bayfield)		
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)
7,200.00	82.98	71.32	2,990.52	75.80	4,978.01	4,977.30	5.00	0.02	-5.04
7,300.00	83.06	66.29	3,002.68	111.68	5,070.53	5,071.11	5.00	0.08	-5.04
7,335.48	83.10	64.50	3,006.95	126.34	5,102.55	5,103.67	5.00	0.11	-5.04
7,400.00	83.00	69.70	3,014.77	151.26	5,161.52	5,163.55	8.00	-0.15	8.06
7,500.00	82.96	77.76	3,027.01	179.04	5,256.72	5,259.73	8.00	-0.04	8.06
7,600.00	83.05	85.82	3,039.20	193.20	5,354.87	5,358.35	8.00	0.10	8.06
7,624.97	83.10	87.83	3,042.21	194.58	5,379.62	5,383.13	8.00	0.18	8.06
7,638.37	83.12	86.75	3,043.82	195.21	5,392.91	5,396.44	8.00	0.18	-8.06
7,700.00	83.12	86.75	3,051.20	198.68	5,454.00	5,457.61	0.00	0.00	0.00
7,800.00	83.12	86.75	3,063.17	204.30	5,553.12	5,556.87	0.00	0.00	0.00
7,900.00	83.12	86.75	3,075.14	209.93	5,652.24	5,656.14	0.00	0.00	0.00
8,000.00	83.12	86.75	3,087.12	215.56	5,751.36	5,755.40	0.00	0.00	0.00
8,100.00	83.12	86.75	3,099.09	221.19	5,850.48	5,854.66	0.00	0.00	0.00
8,149.38	83.12	86.75	3,105.00	223.97	5,899.43	5,903.68	0.00	0.00	0.00
ESC 35 3-1 Lat 3 (Bayfield) PBHL									

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
ESC 35 3-1 Lat 3 (Bayfield)	0.00	0.00	3,105.00	223.97	5,899.43	1,222,584.05	2,420,696.35	37.2610059	-107.4906810
- plan hits target center									
- Point									