



Company: B.P.
Project: La Plata County, CO NAD83
Site: Fischer Mark Federal B5
Well: Fischer Mark Federal B5
Wellbore: Lateral 1 ST1
Design: Plan #3

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 #3 (Fischer Mark Federal B5/Lateral 1 ST1)

Created By: Janie Collins Date: 11:38, February 28 2017

WELL DETAILS: Fischer Mark Federal B5

GL 7185' & RKB 11' @ 7196.00usft (Aztec 507) 7185.00				
Northing	Easting	Latitude	Longitude	Slot
1214702.34	2409773.11	37.2387194	-107.5276174	

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
2639.91	92.39	348.54	2289.09	620.84	-125.96	0.00	0.00	608.71	
3057.62	91.50	9.41	2274.74	1035.92	-133.37	5.00	92.05	1021.85	
5639.45	91.50	9.41	2207.00	3582.10	288.82	0.00	0.00	3593.72 FMF B5 Lat1 St1 PBHL	



Azimuths to Grid North
True North: 1.24°
Magnetic North: 10.56°

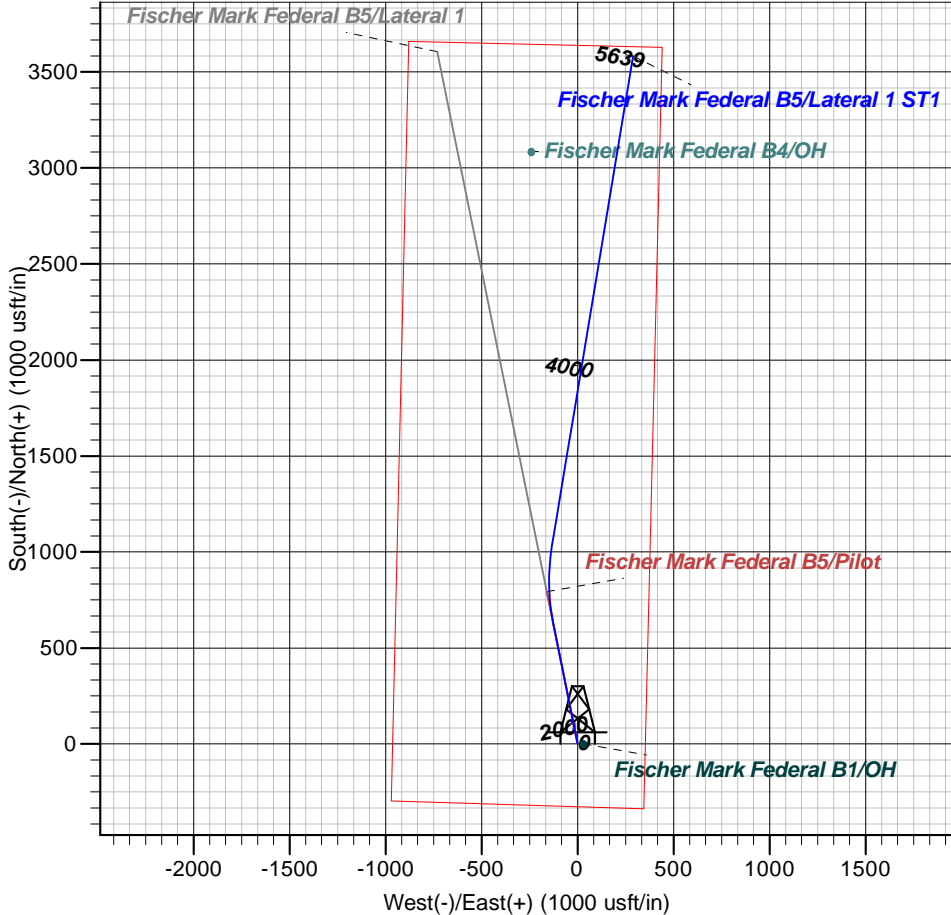
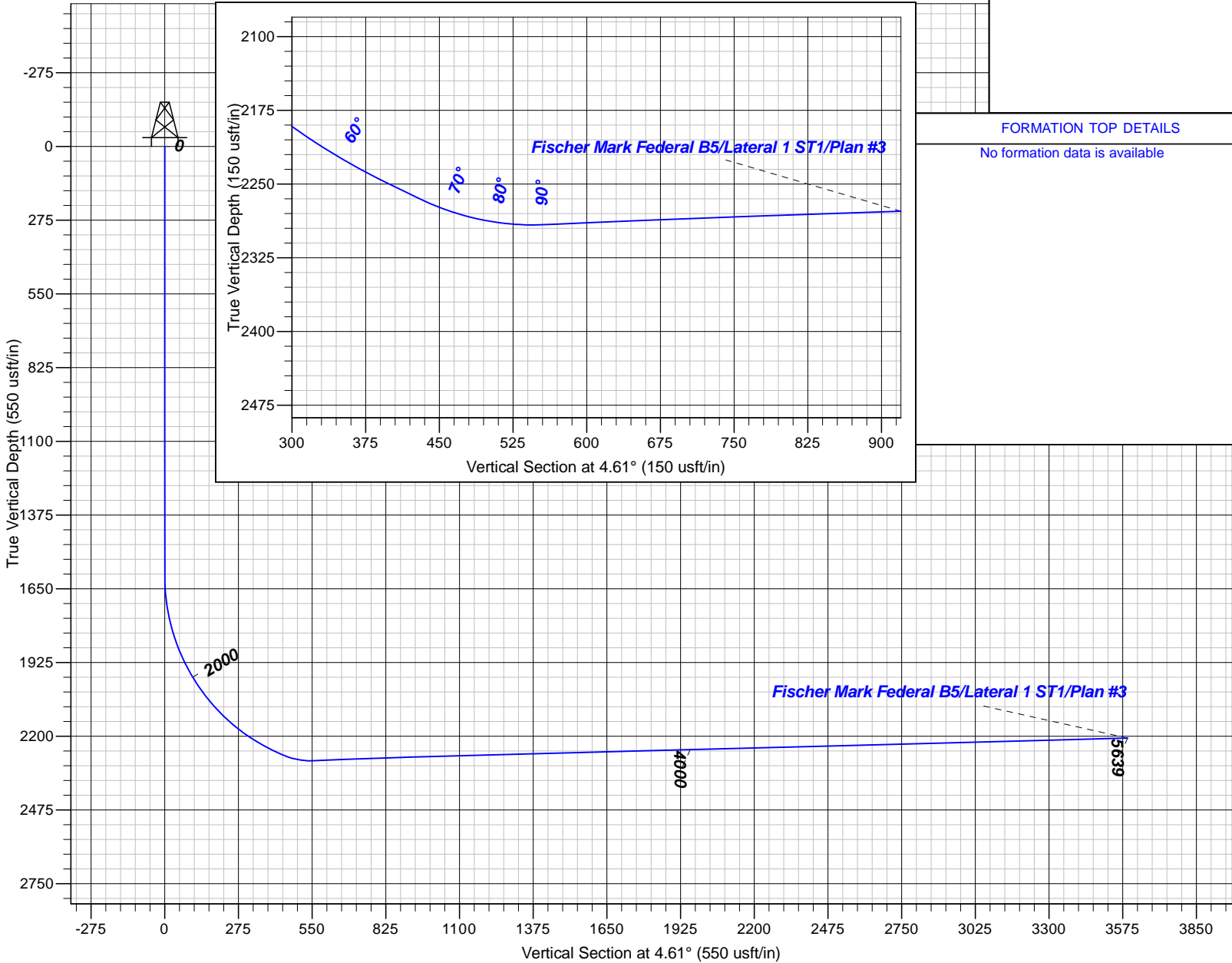
Magnetic Field
Strength: 50261.4snT
Dip Angle: 63.75°
Date: 2/15/2017
Model: HDGM

FORMATION TOP DETAILS

No formation data is available

TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FMF B5 Lat1 St1 PBHL	2207.00	3582.10	288.82	1218284.44	2410061.93	37.2485721	-107.5268925





B.P.

La Plata County, CO NAD83

Fischer Mark Federal B5

Fischer Mark Federal B5

Lateral 1 ST1

Plan: Plan #3

Standard Planning Report

28 February, 2017





Database:	Grand Junction District	Local Co-ordinate Reference:	Well Fischer Mark Federal B5
Company:	B.P.	TVD Reference:	GL 7185' & RKB 11' @ 7196.00usft (Aztec 507)
Project:	La Plata County, CO NAD83	MD Reference:	GL 7185' & RKB 11' @ 7196.00usft (Aztec 507)
Site:	Fischer Mark Federal B5	North Reference:	Grid
Well:	Fischer Mark Federal B5	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 1 ST1		
Design:	Plan #3		

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		Fischer Mark Federal B5			
Site Position:		Northing:	1,214,702.34 usft	Latitude:	37.2387194
From:	Map	Easting:	2,409,773.11 usft	Longitude:	-107.5276174
Position Uncertainty:	0.00 usft	Slot Radius:	13.20 in	Grid Convergence:	-1.24 °

Well	Fischer Mark Federal B5					
Well Position	+N/-S	0.00 usft	Northing:	1,214,702.34 usft	Latitude:	37.2387194
	+E/-W	0.00 usft	Easting:	2,409,773.11 usft	Longitude:	-107.5276174
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	7,185.00 usft

Wellbore	Lateral 1 ST1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	2/15/2017	9.32	63.75	50,261

Design	Plan #3				
Audit Notes:					
Version:	Phase:	PLAN	Tie On Depth:	2,639.91	
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	4.61	

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
2,639.91	92.39	348.54	2,289.09	620.84	-125.96	0.00	0.00	0.00	0.00	
3,057.62	91.50	9.41	2,274.74	1,035.92	-133.37	5.00	-0.21	5.00	92.05	
5,639.45	91.50	9.41	2,207.00	3,582.10	288.82	0.00	0.00	0.00	0.00	FMF B5 Lat1 St1 PB+



Database:	Grand Junction District	Local Co-ordinate Reference:	Well Fischer Mark Federal B5
Company:	B.P.	TVD Reference:	GL 7185' & RKB 11' @ 7196.00usft (Aztec 507)
Project:	La Plata County, CO NAD83	MD Reference:	GL 7185' & RKB 11' @ 7196.00usft (Aztec 507)
Site:	Fischer Mark Federal B5	North Reference:	Grid
Well:	Fischer Mark Federal B5	Survey Calculation Method:	Minimum Curvature
Wellbore:	Lateral 1 ST1		
Design:	Plan #3		

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)
2,639.91	92.39	348.54	2,289.09	620.84	-125.96	608.71	0.00	0.00	0.00
2,700.00	92.28	351.54	2,286.64	679.96	-136.34	666.81	5.00	-0.18	5.00
2,800.00	92.08	356.54	2,282.83	779.32	-146.72	765.01	5.00	-0.20	5.00
2,900.00	91.87	1.54	2,279.38	879.22	-148.39	864.45	5.00	-0.21	5.00
3,000.00	91.64	6.54	2,276.32	978.89	-141.36	964.36	5.00	-0.23	5.00
3,057.62	91.50	9.41	2,274.74	1,035.92	-133.37	1,021.85	5.00	-0.24	5.00
3,100.00	91.50	9.41	2,273.63	1,077.72	-126.43	1,064.07	0.00	0.00	0.00
3,200.00	91.50	9.41	2,271.00	1,176.34	-110.08	1,163.69	0.00	0.00	0.00
3,300.00	91.50	9.41	2,268.38	1,274.96	-93.73	1,263.30	0.00	0.00	0.00
3,400.00	91.50	9.41	2,265.76	1,373.58	-77.38	1,362.91	0.00	0.00	0.00
3,500.00	91.50	9.41	2,263.13	1,472.20	-61.03	1,462.53	0.00	0.00	0.00
3,600.00	91.50	9.41	2,260.51	1,570.81	-44.67	1,562.14	0.00	0.00	0.00
3,700.00	91.50	9.41	2,257.89	1,669.43	-28.32	1,661.76	0.00	0.00	0.00
3,800.00	91.50	9.41	2,255.26	1,768.05	-11.97	1,761.37	0.00	0.00	0.00
3,900.00	91.50	9.41	2,252.64	1,866.67	4.38	1,860.99	0.00	0.00	0.00
4,000.00	91.50	9.41	2,250.01	1,965.29	20.73	1,960.60	0.00	0.00	0.00
4,100.00	91.50	9.41	2,247.39	2,063.91	37.09	2,060.21	0.00	0.00	0.00
4,200.00	91.50	9.41	2,244.77	2,162.53	53.44	2,159.83	0.00	0.00	0.00
4,300.00	91.50	9.41	2,242.14	2,261.15	69.79	2,259.44	0.00	0.00	0.00
4,400.00	91.50	9.41	2,239.52	2,359.77	86.14	2,359.06	0.00	0.00	0.00
4,500.00	91.50	9.41	2,236.90	2,458.39	102.50	2,458.67	0.00	0.00	0.00
4,600.00	91.50	9.41	2,234.27	2,557.01	118.85	2,558.29	0.00	0.00	0.00
4,700.00	91.50	9.41	2,231.65	2,655.62	135.20	2,657.90	0.00	0.00	0.00
4,800.00	91.50	9.41	2,229.02	2,754.24	151.55	2,757.51	0.00	0.00	0.00
4,900.00	91.50	9.41	2,226.40	2,852.86	167.90	2,857.13	0.00	0.00	0.00
5,000.00	91.50	9.41	2,223.78	2,951.48	184.26	2,956.74	0.00	0.00	0.00
5,100.00	91.50	9.41	2,221.15	3,050.10	200.61	3,056.36	0.00	0.00	0.00
5,200.00	91.50	9.41	2,218.53	3,148.72	216.96	3,155.97	0.00	0.00	0.00
5,300.00	91.50	9.41	2,215.91	3,247.34	233.31	3,255.59	0.00	0.00	0.00
5,400.00	91.50	9.41	2,213.28	3,345.96	249.66	3,355.20	0.00	0.00	0.00
5,500.00	91.50	9.41	2,210.66	3,444.58	266.02	3,454.81	0.00	0.00	0.00
5,600.00	91.50	9.41	2,208.04	3,543.20	282.37	3,554.43	0.00	0.00	0.00
5,639.45	91.50	9.41	2,207.00	3,582.10	288.82	3,593.72	0.00	0.00	0.00
FMF B5 Lat1 St1 PBHL - FMF B5 Lat1 St1 PBHL (copy)									

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									
FMF B5 Lat1 St1 PBHL	0.00	0.00	2,207.00	3,582.10	288.82	1,218,284.44	2,410,061.93	37.2485721	-107.5268925
- plan hits target center									
- Point									