

# **US ROCKIES WATTENBERG PLANNING**

**WELD-NAD83-UTMFT13N**

**1N-66W-09 FITZSIMMONS 18-9HZ**

**FITZSIMMONS 19N-9HZ**

**Plan A**

**Plan: Permit Rev-1**

## **Standard Planning Report**

**02 June, 2016**



Azimuths to True North  
Magnetic North: 8.18°

Magnetic Field  
Strength: 52432.5snT  
Dip Angle: 66.61°  
Date: 5/31/2016  
Model: IGRF2010

SITE: 1N-66W-09 FITZSIMMONS 18-9HZ

Well: FITZSIMMONS 19N-9HZ  
Wellbore: Plan A  
Design: Permit Rev-1

#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1469.00	1490.70	Fox Hills
4814.00	5108.39	Sussex
7132.00	7503.70	Sharon Springs
7171.00	7564.32	Niobrara
7279.00	7809.66	Nio B

#### WELL DETAILS: FITZSIMMONS 19N-9HZ

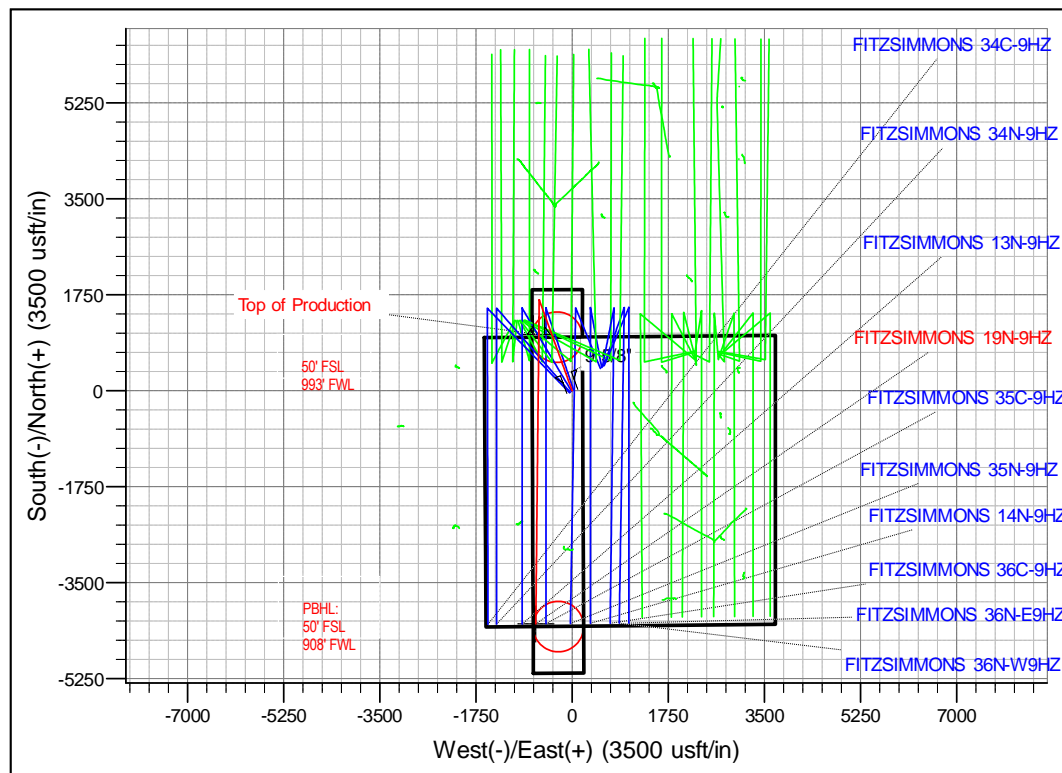
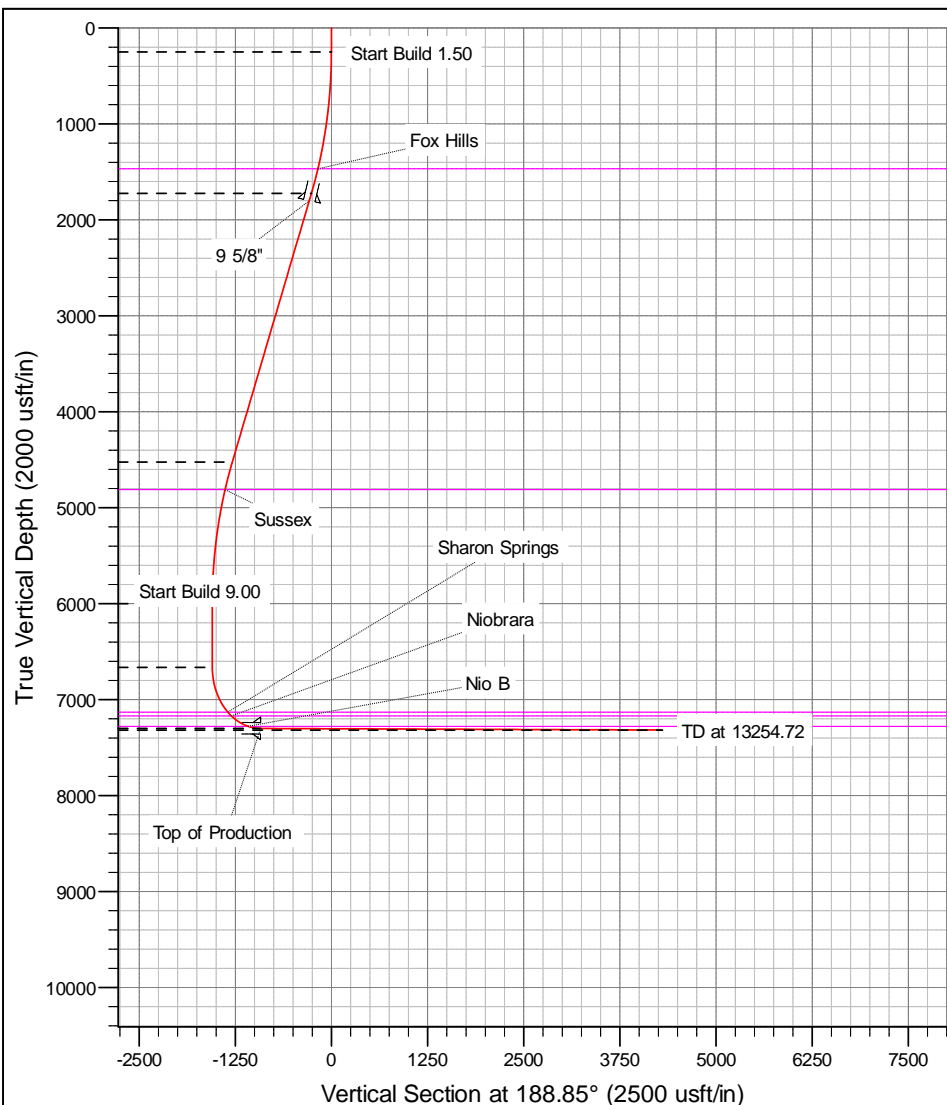
+N/-S	+E/-W	GL: 4992.00 Northing	RKB @ 5009.00usft (D Rig) Easting	Latitude 40.070273	Longitude -104.785977	Slot
0.00	0.00	14552394.86	1700292.55			

#### SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	Vsect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00
1764.82	22.72	340.13	1725.43	278.80	-100.77	1.50	-259.99
4799.50	22.72	340.13	4524.57	1381.20	-499.23	0.00	1287.99
6314.32	0.00	0.00	6000.00	1660.00	-600.00	1.50	1547.98
6979.12	0.00	0.00	6664.80	1660.00	-600.00	0.00	1547.98
7977.12	89.82	180.60	7301.42	1025.41	-606.63	9.00	-919.92
13254.72	89.82	180.60	7318.00	-4251.87	-661.76	0.00	4303.06

#### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
FITZSIMMONS 19N-9HZ_PHL	7301.42	1025.42	-606.63	14553418.82	1699683.45	40.073089	-104.788145
FITZSIMMONS 19N-9HZ_PBHL	7318.00	-4251.87	-661.76	14548141.41	1699641.02	40.058597	-104.788342



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## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well FITZSIMMONS 19N-9HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 5009.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 5009.00usft (D Rig)
<b>Site:</b>	1N-66W-09 FITZSIMMONS 18-9HZ	<b>North Reference:</b>	True
<b>Well:</b>	FITZSIMMONS 19N-9HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-1		

<b>Project</b>	WELD-NAD83-UTMFT13N		
<b>Map System:</b>	Universal Transverse Mercator (US Survey Feet)	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Zone 13N (108 W to 102 W)		

Site		1N-66W-09 FITZSIMMONS 18-9HZ				
Site Position:		Northing:	14,552,357.60 usft	Latitude:	40.070171	
From:	Lat/Long	Easting:	1,700,245.63 usft	Longitude:	-104.786145	
Position Uncertainty:		0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.14 °

Well		FITZSIMMONS 19N-9HZ				
Well Position	+N-S	37.14 usft	Northing:	14,552,394.85 usft	Latitude:	40.070273
	+E-W	47.00 usft	Easting:	1,700,292.55 usft	Longitude:	-104.785977
Position Uncertainty		3.28 usft	Wellhead Elevation:	0.00 usft	Ground Level:	4,992.00 usft

<b>Wellbore</b>	Plan A				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	5/31/2016	8.18	66.61	52,432

<b>Design</b>	Permit Rev-1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<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	188.85

<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	
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,764.82	22.72	340.13	1,725.43	278.80	-100.77	1.50	1.50	0.00	340.13	
4,799.50	22.72	340.13	4,524.57	1,381.20	-499.23	0.00	0.00	0.00	0.00	
6,314.32	0.00	0.00	6,000.00	1,660.00	-600.00	1.50	-1.50	0.00	180.00	
6,979.12	0.00	0.00	6,664.80	1,660.00	-600.00	0.00	0.00	0.00	0.00	
7,977.12	89.82	180.60	7,301.42	1,025.41	-606.63	9.00	9.00	0.00	180.60	
13,254.72	89.82	180.60	7,318.00	-4,251.87	-661.76	0.00	0.00	0.00	0.00	FITZSIMMONS 19N

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well FITZSIMMONS 19N-9HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 5009.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 5009.00usft (D Rig)
<b>Site:</b>	1N-66W-09 FITZSIMMONS 18-9HZ	<b>North Reference:</b>	True
<b>Well:</b>	FITZSIMMONS 19N-9HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-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
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
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.75	340.13	300.00	0.31	-0.11	-0.29	1.50	1.50	0.00
400.00	2.25	340.13	399.96	2.77	-1.00	-2.58	1.50	1.50	0.00
500.00	3.75	340.13	499.82	7.69	-2.78	-7.17	1.50	1.50	0.00
600.00	5.25	340.13	599.51	15.07	-5.45	-14.05	1.50	1.50	0.00
700.00	6.75	340.13	698.96	24.90	-9.00	-23.22	1.50	1.50	0.00
800.00	8.25	340.13	798.10	37.17	-13.44	-34.67	1.50	1.50	0.00
900.00	9.75	340.13	896.87	51.89	-18.75	-48.39	1.50	1.50	0.00
1,000.00	11.25	340.13	995.19	69.02	-24.95	-64.37	1.50	1.50	0.00
1,100.00	12.75	340.13	1,093.00	88.58	-32.02	-82.60	1.50	1.50	0.00
1,200.00	14.25	340.13	1,190.24	110.53	-39.95	-103.07	1.50	1.50	0.00
1,300.00	15.75	340.13	1,286.83	134.87	-48.75	-125.77	1.50	1.50	0.00
1,400.00	17.25	340.13	1,382.71	161.58	-58.40	-150.68	1.50	1.50	0.00
1,490.70	18.61	340.13	1,469.00	187.84	-67.89	-175.16	1.50	1.50	0.00
Fox Hills									
1,500.00	18.75	340.13	1,477.81	190.64	-68.91	-177.78	1.50	1.50	0.00
1,600.00	20.25	340.13	1,572.07	222.03	-80.25	-207.05	1.50	1.50	0.00
1,700.00	21.75	340.13	1,665.43	255.74	-92.43	-238.48	1.50	1.50	0.00
1,764.82	22.72	340.13	1,725.43	278.80	-100.77	-259.99	1.50	1.50	0.00
1,800.00	22.72	340.13	1,757.87	291.58	-105.39	-271.91	0.00	0.00	0.00
1,845.67	22.72	340.13	1,800.00	308.17	-111.39	-287.38	0.00	0.00	0.00
9 5/8"									
1,900.00	22.72	340.13	1,850.11	327.91	-118.52	-305.78	0.00	0.00	0.00
2,000.00	22.72	340.13	1,942.35	364.24	-131.65	-339.66	0.00	0.00	0.00
2,100.00	22.72	340.13	2,034.59	400.56	-144.78	-373.53	0.00	0.00	0.00
2,200.00	22.72	340.13	2,126.83	436.89	-157.91	-407.41	0.00	0.00	0.00
2,300.00	22.72	340.13	2,219.07	473.22	-171.04	-441.28	0.00	0.00	0.00
2,400.00	22.72	340.13	2,311.31	509.54	-184.17	-475.16	0.00	0.00	0.00
2,500.00	22.72	340.13	2,403.54	545.87	-197.30	-509.03	0.00	0.00	0.00
2,600.00	22.72	340.13	2,495.78	582.20	-210.43	-542.91	0.00	0.00	0.00
2,700.00	22.72	340.13	2,588.02	618.52	-223.56	-576.78	0.00	0.00	0.00
2,800.00	22.72	340.13	2,680.26	654.85	-236.69	-610.66	0.00	0.00	0.00
2,900.00	22.72	340.13	2,772.50	691.17	-249.82	-644.53	0.00	0.00	0.00
3,000.00	22.72	340.13	2,864.74	727.50	-262.95	-678.41	0.00	0.00	0.00
3,100.00	22.72	340.13	2,956.98	763.83	-276.08	-712.28	0.00	0.00	0.00
3,200.00	22.72	340.13	3,049.22	800.15	-289.21	-746.16	0.00	0.00	0.00
3,300.00	22.72	340.13	3,141.45	836.48	-302.34	-780.03	0.00	0.00	0.00
3,400.00	22.72	340.13	3,233.69	872.81	-315.47	-813.91	0.00	0.00	0.00
3,500.00	22.72	340.13	3,325.93	909.13	-328.60	-847.78	0.00	0.00	0.00
3,600.00	22.72	340.13	3,418.17	945.46	-341.73	-881.66	0.00	0.00	0.00
3,700.00	22.72	340.13	3,510.41	981.79	-354.86	-915.53	0.00	0.00	0.00
3,800.00	22.72	340.13	3,602.65	1,018.11	-367.99	-949.41	0.00	0.00	0.00
3,900.00	22.72	340.13	3,694.89	1,054.44	-381.12	-983.28	0.00	0.00	0.00
4,000.00	22.72	340.13	3,787.13	1,090.77	-394.25	-1,017.16	0.00	0.00	0.00
4,100.00	22.72	340.13	3,879.37	1,127.09	-407.38	-1,051.03	0.00	0.00	0.00
4,200.00	22.72	340.13	3,971.60	1,163.42	-420.51	-1,084.91	0.00	0.00	0.00
4,300.00	22.72	340.13	4,063.84	1,199.75	-433.64	-1,118.78	0.00	0.00	0.00
4,400.00	22.72	340.13	4,156.08	1,236.07	-446.77	-1,152.66	0.00	0.00	0.00
4,500.00	22.72	340.13	4,248.32	1,272.40	-459.90	-1,186.53	0.00	0.00	0.00
4,600.00	22.72	340.13	4,340.56	1,308.72	-473.03	-1,220.41	0.00	0.00	0.00
4,700.00	22.72	340.13	4,432.80	1,345.05	-486.16	-1,254.28	0.00	0.00	0.00

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## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well FITZSIMMONS 19N-9HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 5009.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 5009.00usft (D Rig)
<b>Site:</b>	1N-66W-09 FITZSIMMONS 18-9HZ	<b>North Reference:</b>	True
<b>Well:</b>	FITZSIMMONS 19N-9HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-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)
4,799.50	22.72	340.13	4,524.57	1,381.20	-499.23	-1,287.99	0.00	0.00	0.00
4,800.00	22.71	340.13	4,525.04	1,381.38	-499.29	-1,288.16	1.50	-1.50	0.00
4,900.00	21.21	340.13	4,617.78	1,416.55	-512.01	-1,320.96	1.50	-1.50	0.00
5,000.00	19.71	340.13	4,711.46	1,449.43	-523.89	-1,351.62	1.50	-1.50	0.00
5,100.00	18.21	340.13	4,806.03	1,480.00	-534.94	-1,380.12	1.50	-1.50	0.00
5,108.39	18.09	340.13	4,814.00	1,482.45	-535.83	-1,382.41	1.50	-1.50	0.00
<b>Sussex</b>									
5,200.00	16.71	340.13	4,901.42	1,508.22	-545.14	-1,406.44	1.50	-1.50	0.00
5,300.00	15.21	340.13	4,997.56	1,534.09	-554.49	-1,430.56	1.50	-1.50	0.00
5,400.00	13.71	340.13	5,094.39	1,557.58	-562.98	-1,452.47	1.50	-1.50	0.00
5,500.00	12.21	340.13	5,191.83	1,578.68	-570.61	-1,472.14	1.50	-1.50	0.00
5,600.00	10.71	340.13	5,289.84	1,597.37	-577.36	-1,489.57	1.50	-1.50	0.00
5,700.00	9.21	340.13	5,388.32	1,613.64	-583.24	-1,504.75	1.50	-1.50	0.00
5,800.00	7.71	340.13	5,487.23	1,627.48	-588.25	-1,517.66	1.50	-1.50	0.00
5,900.00	6.21	340.13	5,586.49	1,638.89	-592.37	-1,528.29	1.50	-1.50	0.00
6,000.00	4.71	340.13	5,686.03	1,647.84	-595.61	-1,536.64	1.50	-1.50	0.00
6,100.00	3.21	340.13	5,785.79	1,654.35	-597.96	-1,542.71	1.50	-1.50	0.00
6,200.00	1.71	340.13	5,885.70	1,658.39	-599.42	-1,546.48	1.50	-1.50	0.00
6,300.00	0.21	340.13	5,985.68	1,659.97	-599.99	-1,547.96	1.50	-1.50	0.00
6,314.32	0.00	0.00	6,000.00	1,660.00	-600.00	-1,547.98	1.50	-1.50	0.00
6,400.00	0.00	0.00	6,085.68	1,660.00	-600.00	-1,547.98	0.00	0.00	0.00
6,500.00	0.00	0.00	6,185.68	1,660.00	-600.00	-1,547.98	0.00	0.00	0.00
6,600.00	0.00	0.00	6,285.68	1,660.00	-600.00	-1,547.98	0.00	0.00	0.00
6,700.00	0.00	0.00	6,385.68	1,660.00	-600.00	-1,547.98	0.00	0.00	0.00
6,800.00	0.00	0.00	6,485.68	1,660.00	-600.00	-1,547.98	0.00	0.00	0.00
6,900.00	0.00	0.00	6,585.68	1,660.00	-600.00	-1,547.98	0.00	0.00	0.00
6,979.12	0.00	0.00	6,664.80	1,660.00	-600.00	-1,547.98	0.00	0.00	0.00
7,000.00	1.88	180.60	6,685.68	1,659.66	-600.00	-1,547.64	9.00	9.00	0.00
7,100.00	10.88	180.60	6,784.95	1,648.56	-600.12	-1,536.66	9.00	9.00	0.00
7,200.00	19.88	180.60	6,881.27	1,622.07	-600.40	-1,510.44	9.00	9.00	0.00
7,300.00	28.88	180.60	6,972.26	1,580.84	-600.83	-1,469.63	9.00	9.00	0.00
7,400.00	37.88	180.60	7,055.68	1,525.88	-601.40	-1,415.24	9.00	9.00	0.00
7,500.00	46.88	180.60	7,129.48	1,458.55	-602.10	-1,348.60	9.00	9.00	0.00
7,503.70	47.21	180.60	7,132.00	1,455.84	-602.13	-1,345.92	9.00	9.00	0.00
<b>Sharon Springs</b>									
7,564.32	52.67	180.60	7,171.00	1,409.46	-602.62	-1,300.02	9.00	9.00	0.00
<b>Niobrara</b>									
7,600.00	55.88	180.60	7,191.83	1,380.50	-602.92	-1,271.36	9.00	9.00	0.00
7,700.00	64.88	180.60	7,241.21	1,293.67	-603.83	-1,185.42	9.00	9.00	0.00
7,800.00	73.88	180.60	7,276.39	1,200.18	-604.80	-1,092.89	9.00	9.00	0.00
7,809.66	74.75	180.60	7,279.00	1,190.88	-604.90	-1,083.69	9.00	9.00	0.00
<b>Nio B</b>									
7,900.00	82.88	180.60	7,296.51	1,102.33	-605.83	-996.05	9.00	9.00	0.00
7,977.12	89.82	180.60	7,301.42	1,025.42	-606.63	-919.93	9.00	9.00	0.00
<b>Top of Production - FITZSIMMONS 19N-9HZ_PHL</b>									
8,000.00	89.82	180.60	7,301.49	1,002.54	-606.87	-897.29	0.00	0.00	0.00
8,100.00	89.82	180.60	7,301.81	902.55	-607.91	-798.32	0.00	0.00	0.00
8,200.00	89.82	180.60	7,302.12	802.55	-608.96	-699.36	0.00	0.00	0.00
8,300.00	89.82	180.60	7,302.43	702.56	-610.00	-600.39	0.00	0.00	0.00
8,400.00	89.82	180.60	7,302.75	602.56	-611.05	-501.42	0.00	0.00	0.00
8,500.00	89.82	180.60	7,303.06	502.57	-612.09	-402.46	0.00	0.00	0.00
8,600.00	89.82	180.60	7,303.38	402.58	-613.14	-303.49	0.00	0.00	0.00
8,700.00	89.82	180.60	7,303.69	302.58	-614.18	-204.53	0.00	0.00	0.00

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well FITZSIMMONS 19N-9HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 5009.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 5009.00usft (D Rig)
<b>Site:</b>	1N-66W-09 FITZSIMMONS 18-9HZ	<b>North Reference:</b>	True
<b>Well:</b>	FITZSIMMONS 19N-9HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-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)
8,800.00	89.82	180.60	7,304.01	202.59	-615.22	-105.56	0.00	0.00	0.00
8,900.00	89.82	180.60	7,304.32	102.59	-616.27	-6.60	0.00	0.00	0.00
9,000.00	89.82	180.60	7,304.63	2.60	-617.31	92.37	0.00	0.00	0.00
9,100.00	89.82	180.60	7,304.95	-97.39	-618.36	191.33	0.00	0.00	0.00
9,200.00	89.82	180.60	7,305.26	-197.39	-619.40	290.30	0.00	0.00	0.00
9,300.00	89.82	180.60	7,305.58	-297.38	-620.45	389.26	0.00	0.00	0.00
9,400.00	89.82	180.60	7,305.89	-397.38	-621.49	488.23	0.00	0.00	0.00
9,500.00	89.82	180.60	7,306.20	-497.37	-622.54	587.19	0.00	0.00	0.00
9,600.00	89.82	180.60	7,306.52	-597.36	-623.58	686.16	0.00	0.00	0.00
9,700.00	89.82	180.60	7,306.83	-697.36	-624.63	785.12	0.00	0.00	0.00
9,800.00	89.82	180.60	7,307.15	-797.35	-625.67	884.09	0.00	0.00	0.00
9,900.00	89.82	180.60	7,307.46	-897.35	-626.71	983.05	0.00	0.00	0.00
10,000.00	89.82	180.60	7,307.78	-997.34	-627.76	1,082.02	0.00	0.00	0.00
10,100.00	89.82	180.60	7,308.09	-1,097.33	-628.80	1,180.98	0.00	0.00	0.00
10,200.00	89.82	180.60	7,308.40	-1,197.33	-629.85	1,279.95	0.00	0.00	0.00
10,300.00	89.82	180.60	7,308.72	-1,297.32	-630.89	1,378.91	0.00	0.00	0.00
10,400.00	89.82	180.60	7,309.03	-1,397.32	-631.94	1,477.88	0.00	0.00	0.00
10,500.00	89.82	180.60	7,309.35	-1,497.31	-632.98	1,576.84	0.00	0.00	0.00
10,600.00	89.82	180.60	7,309.66	-1,597.30	-634.03	1,675.81	0.00	0.00	0.00
10,700.00	89.82	180.60	7,309.97	-1,697.30	-635.07	1,774.77	0.00	0.00	0.00
10,800.00	89.82	180.60	7,310.29	-1,797.29	-636.12	1,873.74	0.00	0.00	0.00
10,900.00	89.82	180.60	7,310.60	-1,897.29	-637.16	1,972.70	0.00	0.00	0.00
11,000.00	89.82	180.60	7,310.92	-1,997.28	-638.21	2,071.67	0.00	0.00	0.00
11,100.00	89.82	180.60	7,311.23	-2,097.28	-639.25	2,170.63	0.00	0.00	0.00
11,200.00	89.82	180.60	7,311.55	-2,197.27	-640.29	2,269.60	0.00	0.00	0.00
11,300.00	89.82	180.60	7,311.86	-2,297.26	-641.34	2,368.56	0.00	0.00	0.00
11,400.00	89.82	180.60	7,312.17	-2,397.26	-642.38	2,467.53	0.00	0.00	0.00
11,500.00	89.82	180.60	7,312.49	-2,497.25	-643.43	2,566.49	0.00	0.00	0.00
11,600.00	89.82	180.60	7,312.80	-2,597.25	-644.47	2,665.46	0.00	0.00	0.00
11,700.00	89.82	180.60	7,313.12	-2,697.24	-645.52	2,764.43	0.00	0.00	0.00
11,800.00	89.82	180.60	7,313.43	-2,797.23	-646.56	2,863.39	0.00	0.00	0.00
11,900.00	89.82	180.60	7,313.74	-2,897.23	-647.61	2,962.36	0.00	0.00	0.00
12,000.00	89.82	180.60	7,314.06	-2,997.22	-648.65	3,061.32	0.00	0.00	0.00
12,100.00	89.82	180.60	7,314.37	-3,097.22	-649.70	3,160.29	0.00	0.00	0.00
12,200.00	89.82	180.60	7,314.69	-3,197.21	-650.74	3,259.25	0.00	0.00	0.00
12,300.00	89.82	180.60	7,315.00	-3,297.20	-651.78	3,358.22	0.00	0.00	0.00
12,400.00	89.82	180.60	7,315.31	-3,397.20	-652.83	3,457.18	0.00	0.00	0.00
12,500.00	89.82	180.60	7,315.63	-3,497.19	-653.87	3,556.15	0.00	0.00	0.00
12,600.00	89.82	180.60	7,315.94	-3,597.19	-654.92	3,655.11	0.00	0.00	0.00
12,700.00	89.82	180.60	7,316.26	-3,697.18	-655.96	3,754.08	0.00	0.00	0.00
12,800.00	89.82	180.60	7,316.57	-3,797.17	-657.01	3,853.04	0.00	0.00	0.00
12,900.00	89.82	180.60	7,316.89	-3,897.17	-658.05	3,952.01	0.00	0.00	0.00
13,000.00	89.82	180.60	7,317.20	-3,997.16	-659.10	4,050.97	0.00	0.00	0.00
13,100.00	89.82	180.60	7,317.51	-4,097.16	-660.14	4,149.94	0.00	0.00	0.00
13,200.00	89.82	180.60	7,317.83	-4,197.15	-661.19	4,248.90	0.00	0.00	0.00
13,254.72	89.82	180.60	7,318.00	-4,251.87	-661.76	4,303.06	0.00	0.00	0.00
FITZSIMMONS 19N-9HZ_PBHL									

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well FITZSIMMONS 19N-9HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 5009.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 5009.00usft (D Rig)
<b>Site:</b>	1N-66W-09 FITZSIMMONS 18-9HZ	<b>North Reference:</b>	True
<b>Well:</b>	FITZSIMMONS 19N-9HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-1		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
FITZSIMMONS 19N-9	0.00	0.00	7,301.42	1,025.42	-606.63	14,553,418.81	1,699,683.45	40.073089	-104.788146
- plan hits target center									
- Point									
FITZSIMMONS 19N-9	0.00	0.00	7,318.00	-4,251.87	-661.76	14,548,141.40	1,699,641.02	40.058597	-104.788342
- plan hits target center									
- Point									

Casing Points					
	Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
	1,845.67	1,800.00	9 5/8"	9-5/8	13-1/2
	7,977.12	7,301.42	Top of Production	5-1/2	8-1/2

Formations						
	Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
	1,490.70	1,469.00	Fox Hills			
	5,108.39	4,814.00	Sussex			
	7,503.70	7,132.00	Sharon Springs			
	7,564.32	7,171.00	Niobrara			
	7,809.66	7,279.00	Nio B			