

# **US ROCKIES WATTENBERG PLANNING**

**WELD-NAD83-UTMFT13N  
2N-67W-04 Whiston Pad  
WHISTON 39C-33HZ**

**Plan A**

**Plan: Permit Rev-1**

## **Standard Planning Report**

**27 July, 2016**



Azimuths to True North  
Magnetic North: 8.23°

Magnetic Field  
Strength: 52459.7snT  
Dip Angle: 66.67°  
Date: 7/19/2016  
Model: IGRF2010

SITE: 2N-67W-04 Whiston Pad

Well: WHISTON 39C-33HZ  
Wellbore: Plan A  
Design: Permit Rev-1

#### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
952.00	953.06	Fox Hills
3871.00	4049.03	Parkman
4287.00	4495.56	Sussex
7090.00	7350.41	Sharon Springs
7178.00	7453.10	Niobrara
7231.00	7520.94	Nio B
7285.00	7597.48	Nio C
7414.00	7860.17	Fort Hayes
7435.00	7947.80	Codell

#### WELL DETAILS: WHISTON 39C-33HZ

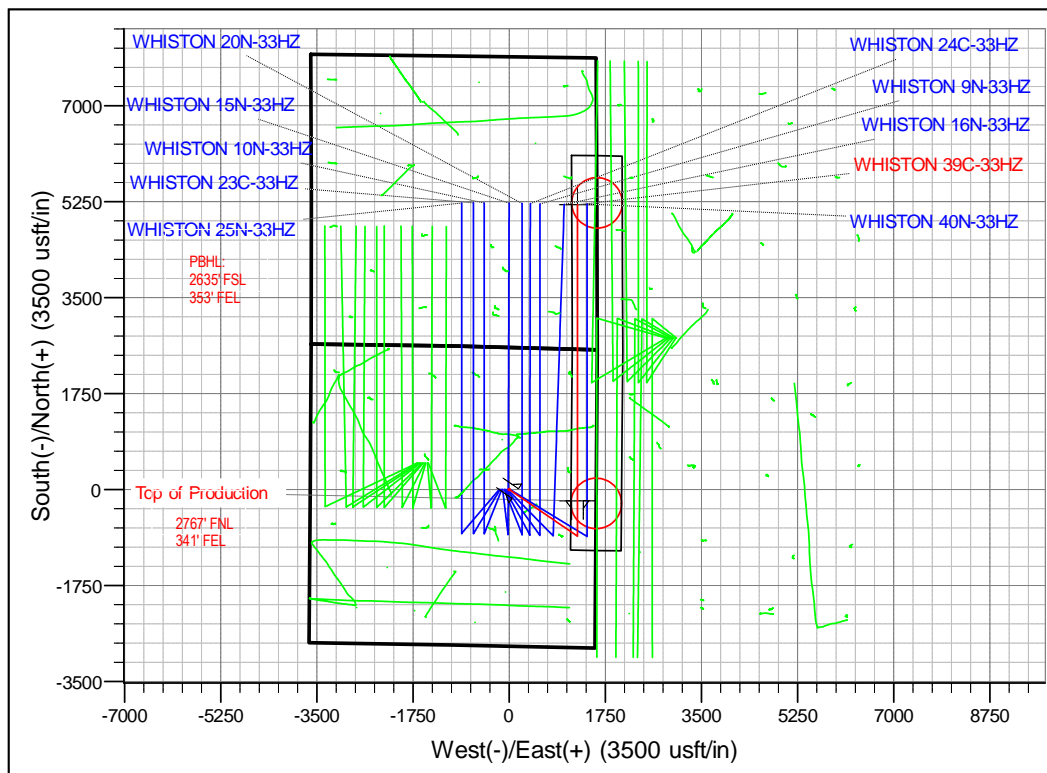
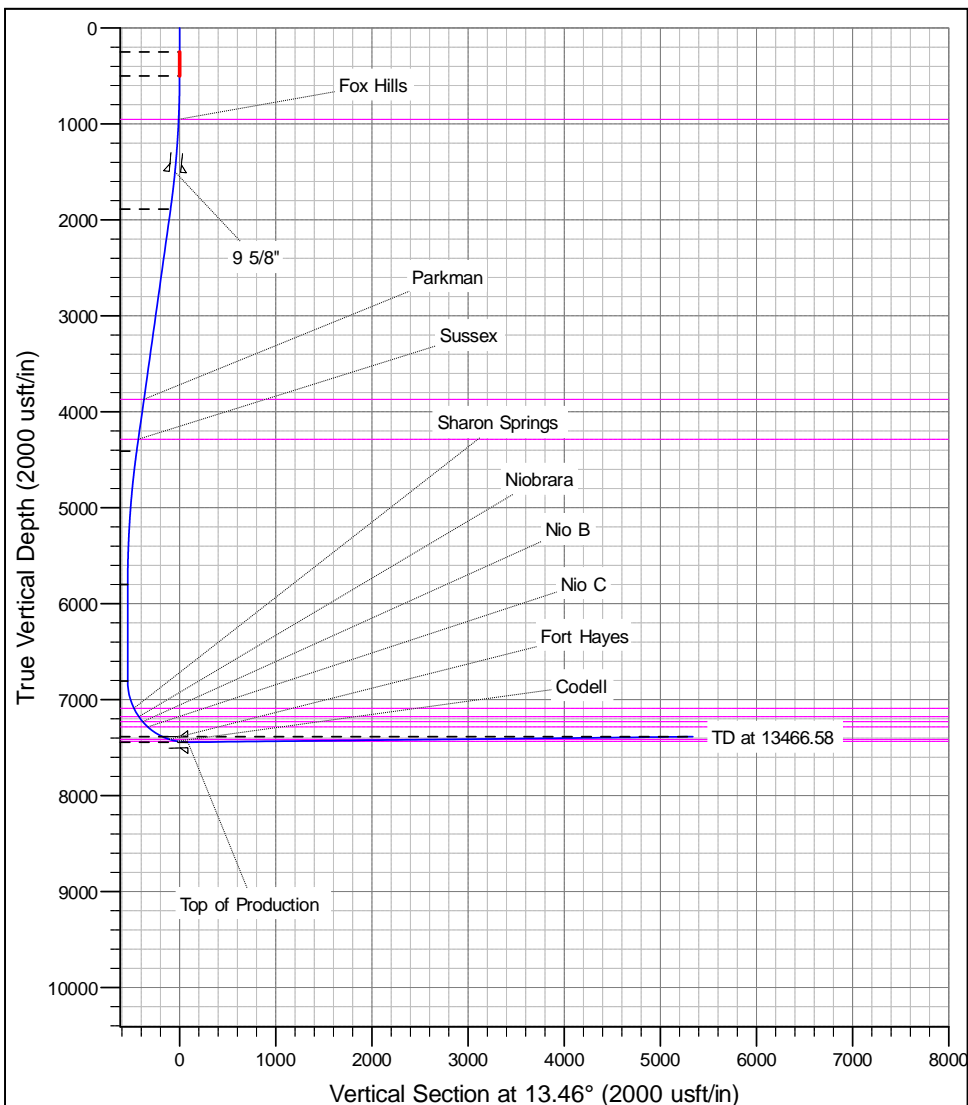
+N/-S	+E/-W	GL: 4887.00	RKB @ 4904.00usft (D Rig)	Longitude	Slot
0.00	0.00	Northing 14587872.77	Easting 1670741.64	Latitude 40.167847	Longitude -104.891450

#### 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
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00
1920.59	21.31	124.43	1888.06	-147.66	215.38	1.50	-93.48
4629.66	21.31	124.43	4411.94	-704.34	1027.33	0.00	-445.89
6050.25	0.00	0.00	5800.00	-852.00	1242.71	1.50	-539.37
7058.17	0.00	0.00	6807.92	-852.00	1242.71	0.00	-539.37
8064.95	90.61	360.00	7444.51	-208.60	1242.71	9.00	86.36
13466.58	90.61	360.00	7387.00	5192.72	1242.71	0.00	5339.35

#### DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Whiston 39C-33HZ_PBHL	7387.00	5192.72	1242.71	14593067.00	1671978.00	40.182107	-104.887001



# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well WHISTON 39C-33HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4904.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4904.00usft (D Rig)
<b>Site:</b>	2N-67W-04 Whiston Pad	<b>North Reference:</b>	True
<b>Well:</b>	WHISTON 39C-33HZ	<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		2N-67W-04 Whiston Pad			
Site Position:		Northing:	14,587,875.82 usft	Latitude:	40.167856
From:	Lat/Long	Easting:	1,670,561.72 usft	Longitude:	-104.892094
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.07 °

Well	WHISTON 39C-33HZ					
Well Position	+N/-S	-3.28 usft	Northing:	14,587,872.76 usft	Latitude:	40.167847
	+E/-W	179.91 usft	Easting:	1,670,741.63 usft	Longitude:	-104.891450
Position Uncertainty		3.28 usft	Wellhead Elevation:	0.00 usft	Ground Level:	4,887.00 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	7/19/2016	8.23	66.67	52,460

<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	13.46

<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	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,920.59	21.31	124.43	1,888.06	-147.66	215.38	1.50	1.50	0.00	124.43	
4,629.66	21.31	124.43	4,411.94	-704.34	1,027.33	0.00	0.00	0.00	0.00	
6,050.25	0.00	0.00	5,800.00	-852.00	1,242.71	1.50	-1.50	0.00	180.00	
7,058.17	0.00	0.00	6,807.92	-852.00	1,242.71	0.00	0.00	0.00	0.00	
8,064.95	90.61	360.00	7,444.51	-208.60	1,242.71	9.00	9.00	0.00	360.00	
13,466.58	90.61	360.00	7,387.00	5,192.72	1,242.71	0.00	0.00	0.00	0.00	Whiston 39C-33HZ

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well WHISTON 39C-33HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4904.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4904.00usft (D Rig)
<b>Site:</b>	2N-67W-04 Whiston Pad	<b>North Reference:</b>	True
<b>Well:</b>	WHISTON 39C-33HZ	<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	0.00	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	1.50	124.43	599.99	-0.74	1.08	-0.47	1.50	1.50	0.00
700.00	3.00	124.43	699.91	-2.96	4.32	-1.87	1.50	1.50	0.00
800.00	4.50	124.43	799.69	-6.66	9.71	-4.22	1.50	1.50	0.00
900.00	6.00	124.43	899.27	-11.83	17.26	-7.49	1.50	1.50	0.00
953.06	6.80	124.43	952.00	-15.18	22.13	-9.61	1.50	1.50	0.00
<b>Fox Hills</b>									
1,000.00	7.50	124.43	998.57	-18.48	26.95	-11.70	1.50	1.50	0.00
1,100.00	9.00	124.43	1,097.54	-26.59	38.79	-16.83	1.50	1.50	0.00
1,200.00	10.50	124.43	1,196.09	-36.17	52.75	-22.90	1.50	1.50	0.00
1,300.00	12.00	124.43	1,294.16	-47.20	68.84	-29.88	1.50	1.50	0.00
1,400.00	13.50	124.43	1,391.70	-59.68	87.05	-37.78	1.50	1.50	0.00
1,500.00	15.00	124.43	1,488.62	-73.60	107.35	-46.59	1.50	1.50	0.00
1,511.79	15.18	124.43	1,500.00	-75.33	109.88	-47.69	1.50	1.50	0.00
<b>9 5/8"</b>									
1,600.00	16.50	124.43	1,584.86	-88.95	129.73	-56.31	1.50	1.50	0.00
1,700.00	18.00	124.43	1,680.36	-105.71	154.19	-66.92	1.50	1.50	0.00
1,800.00	19.50	124.43	1,775.05	-123.89	180.70	-78.43	1.50	1.50	0.00
1,900.00	21.00	124.43	1,868.86	-143.46	209.25	-90.82	1.50	1.50	0.00
1,920.59	21.31	124.43	1,888.06	-147.66	215.38	-93.48	1.50	1.50	0.00
2,000.00	21.31	124.43	1,962.05	-163.98	239.18	-103.81	0.00	0.00	0.00
2,100.00	21.31	124.43	2,055.21	-184.53	269.15	-116.82	0.00	0.00	0.00
2,200.00	21.31	124.43	2,148.38	-205.08	299.12	-129.83	0.00	0.00	0.00
2,300.00	21.31	124.43	2,241.54	-225.63	329.09	-142.83	0.00	0.00	0.00
2,400.00	21.31	124.43	2,334.70	-246.17	359.06	-155.84	0.00	0.00	0.00
2,500.00	21.31	124.43	2,427.87	-266.72	389.04	-168.85	0.00	0.00	0.00
2,600.00	21.31	124.43	2,521.03	-287.27	419.01	-181.86	0.00	0.00	0.00
2,700.00	21.31	124.43	2,614.19	-307.82	448.98	-194.87	0.00	0.00	0.00
2,800.00	21.31	124.43	2,707.36	-328.37	478.95	-207.88	0.00	0.00	0.00
2,900.00	21.31	124.43	2,800.52	-348.92	508.92	-220.89	0.00	0.00	0.00
3,000.00	21.31	124.43	2,893.68	-369.47	538.90	-233.89	0.00	0.00	0.00
3,100.00	21.31	124.43	2,986.85	-390.01	568.87	-246.90	0.00	0.00	0.00
3,200.00	21.31	124.43	3,080.01	-410.56	598.84	-259.91	0.00	0.00	0.00
3,300.00	21.31	124.43	3,173.17	-431.11	628.81	-272.92	0.00	0.00	0.00
3,400.00	21.31	124.43	3,266.34	-451.66	658.78	-285.93	0.00	0.00	0.00
3,500.00	21.31	124.43	3,359.50	-472.21	688.75	-298.94	0.00	0.00	0.00
3,600.00	21.31	124.43	3,452.67	-492.76	718.73	-311.94	0.00	0.00	0.00
3,700.00	21.31	124.43	3,545.83	-513.31	748.70	-324.95	0.00	0.00	0.00
3,800.00	21.31	124.43	3,638.99	-533.85	778.67	-337.96	0.00	0.00	0.00
3,900.00	21.31	124.43	3,732.16	-554.40	808.64	-350.97	0.00	0.00	0.00
4,000.00	21.31	124.43	3,825.32	-574.95	838.61	-363.98	0.00	0.00	0.00
4,049.03	21.31	124.43	3,871.00	-585.03	853.31	-370.36	0.00	0.00	0.00
<b>Parkman</b>									
4,100.00	21.31	124.43	3,918.48	-595.50	868.58	-376.99	0.00	0.00	0.00
4,200.00	21.31	124.43	4,011.65	-616.05	898.56	-390.00	0.00	0.00	0.00
4,300.00	21.31	124.43	4,104.81	-636.60	928.53	-403.00	0.00	0.00	0.00
4,400.00	21.31	124.43	4,197.97	-657.15	958.50	-416.01	0.00	0.00	0.00

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well WHISTON 39C-33HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4904.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4904.00usft (D Rig)
<b>Site:</b>	2N-67W-04 Whiston Pad	<b>North Reference:</b>	True
<b>Well:</b>	WHISTON 39C-33HZ	<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)
4,495.56	21.31	124.43	4,287.00	-676.78	987.14	-428.44	0.00	0.00	0.00
<b>Sussex</b>									
4,500.00	21.31	124.43	4,291.14	-677.69	988.47	-429.02	0.00	0.00	0.00
4,600.00	21.31	124.43	4,384.30	-698.24	1,018.44	-442.03	0.00	0.00	0.00
4,629.66	21.31	124.43	4,411.94	-704.34	1,027.33	-445.89	0.00	0.00	0.00
4,700.00	20.25	124.43	4,477.70	-718.45	1,047.92	-454.82	1.50	-1.50	0.00
4,800.00	18.75	124.43	4,571.96	-737.33	1,075.45	-466.77	1.50	-1.50	0.00
4,900.00	17.25	124.43	4,667.06	-754.81	1,100.94	-477.84	1.50	-1.50	0.00
5,000.00	15.75	124.43	4,762.93	-770.87	1,124.37	-488.01	1.50	-1.50	0.00
5,100.00	14.25	124.43	4,859.52	-785.51	1,145.72	-497.27	1.50	-1.50	0.00
5,200.00	12.75	124.43	4,956.75	-798.71	1,164.98	-505.63	1.50	-1.50	0.00
5,300.00	11.25	124.43	5,054.57	-810.47	1,182.14	-513.08	1.50	-1.50	0.00
5,400.00	9.75	124.43	5,152.89	-820.78	1,197.17	-519.60	1.50	-1.50	0.00
5,500.00	8.25	124.43	5,251.65	-829.63	1,210.08	-525.20	1.50	-1.50	0.00
5,600.00	6.75	124.43	5,350.79	-837.01	1,220.85	-529.88	1.50	-1.50	0.00
5,700.00	5.25	124.43	5,450.24	-842.93	1,229.48	-533.62	1.50	-1.50	0.00
5,800.00	3.75	124.43	5,549.93	-847.37	1,235.95	-536.43	1.50	-1.50	0.00
5,900.00	2.25	124.43	5,649.79	-850.33	1,240.27	-538.31	1.50	-1.50	0.00
6,000.00	0.75	124.43	5,749.75	-851.81	1,242.44	-539.25	1.50	-1.50	0.00
6,050.25	0.00	0.00	5,800.00	-852.00	1,242.71	-539.37	1.50	-1.50	0.00
6,100.00	0.00	0.00	5,849.75	-852.00	1,242.71	-539.37	0.00	0.00	0.00
6,200.00	0.00	0.00	5,949.75	-852.00	1,242.71	-539.37	0.00	0.00	0.00
6,300.00	0.00	0.00	6,049.75	-852.00	1,242.71	-539.37	0.00	0.00	0.00
6,400.00	0.00	0.00	6,149.75	-852.00	1,242.71	-539.37	0.00	0.00	0.00
6,500.00	0.00	0.00	6,249.75	-852.00	1,242.71	-539.37	0.00	0.00	0.00
6,600.00	0.00	0.00	6,349.75	-852.00	1,242.71	-539.37	0.00	0.00	0.00
6,700.00	0.00	0.00	6,449.75	-852.00	1,242.71	-539.37	0.00	0.00	0.00
6,800.00	0.00	0.00	6,549.75	-852.00	1,242.71	-539.37	0.00	0.00	0.00
6,900.00	0.00	0.00	6,649.75	-852.00	1,242.71	-539.37	0.00	0.00	0.00
7,000.00	0.00	0.00	6,749.75	-852.00	1,242.71	-539.37	0.00	0.00	0.00
7,058.17	0.00	0.00	6,807.92	-852.00	1,242.71	-539.37	0.00	0.00	0.00
7,100.00	3.76	360.00	6,849.72	-850.63	1,242.71	-538.03	9.00	9.00	0.00
7,200.00	12.76	360.00	6,948.58	-836.27	1,242.71	-524.07	9.00	9.00	0.00
7,300.00	21.76	360.00	7,043.98	-806.62	1,242.71	-495.23	9.00	9.00	0.00
7,350.41	26.30	360.00	7,090.00	-786.10	1,242.71	-475.27	9.00	9.00	0.00
<b>Sharon Springs</b>									
7,400.00	30.76	360.00	7,133.56	-762.41	1,242.71	-452.24	9.00	9.00	0.00
7,453.10	35.54	360.00	7,178.00	-733.38	1,242.71	-424.01	9.00	9.00	0.00
<b>Niobrara</b>									
7,500.00	39.76	360.00	7,215.13	-704.74	1,242.71	-396.15	9.00	9.00	0.00
7,520.94	41.65	360.00	7,231.00	-691.08	1,242.71	-382.87	9.00	9.00	0.00
<b>Nio B</b>									
7,597.48	48.54	360.00	7,285.00	-636.90	1,242.71	-330.18	9.00	9.00	0.00
<b>Nio C</b>									
7,600.00	48.76	360.00	7,286.67	-635.01	1,242.71	-328.34	9.00	9.00	0.00
7,700.00	57.76	360.00	7,346.42	-554.95	1,242.71	-250.48	9.00	9.00	0.00
7,800.00	66.76	360.00	7,392.91	-466.54	1,242.71	-164.49	9.00	9.00	0.00
7,860.17	72.18	360.00	7,414.00	-410.20	1,242.71	-109.70	9.00	9.00	0.00
<b>Fort Hayes</b>									
7,900.00	75.76	360.00	7,424.99	-371.93	1,242.71	-72.48	9.00	9.00	0.00
7,947.80	80.07	360.00	7,435.00	-325.20	1,242.71	-27.03	9.00	9.00	0.00
<b>Codell</b>									
8,000.00	84.76	360.00	7,441.89	-273.47	1,242.71	23.27	9.00	9.00	0.00

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well WHISTON 39C-33HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4904.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4904.00usft (D Rig)
<b>Site:</b>	2N-67W-04 Whiston Pad	<b>North Reference:</b>	True
<b>Well:</b>	WHISTON 39C-33HZ	<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)
8,064.95	90.61	360.00	7,444.51	-208.60	1,242.71	86.36	9.00	9.00	0.00
<b>Top of Production - WHISTON 39C-33HZ_PHL</b>									
8,100.00	90.61	360.00	7,444.13	-173.56	1,242.71	120.45	0.00	0.00	0.00
8,200.00	90.61	360.00	7,443.07	-73.56	1,242.71	217.69	0.00	0.00	0.00
8,300.00	90.61	360.00	7,442.01	26.43	1,242.71	314.94	0.00	0.00	0.00
8,400.00	90.61	360.00	7,440.94	126.43	1,242.71	412.19	0.00	0.00	0.00
8,500.00	90.61	360.00	7,439.88	226.42	1,242.71	509.44	0.00	0.00	0.00
8,600.00	90.61	360.00	7,438.81	326.42	1,242.71	606.69	0.00	0.00	0.00
8,700.00	90.61	360.00	7,437.75	426.41	1,242.71	703.94	0.00	0.00	0.00
8,800.00	90.61	360.00	7,436.68	526.40	1,242.71	801.18	0.00	0.00	0.00
8,900.00	90.61	360.00	7,435.62	626.40	1,242.71	898.43	0.00	0.00	0.00
9,000.00	90.61	360.00	7,434.55	726.39	1,242.71	995.68	0.00	0.00	0.00
9,100.00	90.61	360.00	7,433.49	826.39	1,242.71	1,092.93	0.00	0.00	0.00
9,200.00	90.61	360.00	7,432.42	926.38	1,242.71	1,190.18	0.00	0.00	0.00
9,300.00	90.61	360.00	7,431.36	1,026.38	1,242.71	1,287.42	0.00	0.00	0.00
9,400.00	90.61	360.00	7,430.29	1,126.37	1,242.71	1,384.67	0.00	0.00	0.00
9,500.00	90.61	360.00	7,429.23	1,226.36	1,242.71	1,481.92	0.00	0.00	0.00
9,600.00	90.61	360.00	7,428.16	1,326.36	1,242.71	1,579.17	0.00	0.00	0.00
9,700.00	90.61	360.00	7,427.10	1,426.35	1,242.71	1,676.42	0.00	0.00	0.00
9,800.00	90.61	360.00	7,426.04	1,526.35	1,242.71	1,773.67	0.00	0.00	0.00
9,900.00	90.61	360.00	7,424.97	1,626.34	1,242.71	1,870.91	0.00	0.00	0.00
10,000.00	90.61	360.00	7,423.91	1,726.34	1,242.71	1,968.16	0.00	0.00	0.00
10,100.00	90.61	360.00	7,422.84	1,826.33	1,242.71	2,065.41	0.00	0.00	0.00
10,200.00	90.61	360.00	7,421.78	1,926.33	1,242.71	2,162.66	0.00	0.00	0.00
10,300.00	90.61	360.00	7,420.71	2,026.32	1,242.71	2,259.91	0.00	0.00	0.00
10,400.00	90.61	360.00	7,419.65	2,126.31	1,242.71	2,357.16	0.00	0.00	0.00
10,500.00	90.61	360.00	7,418.58	2,226.31	1,242.71	2,454.40	0.00	0.00	0.00
10,600.00	90.61	360.00	7,417.52	2,326.30	1,242.71	2,551.65	0.00	0.00	0.00
10,700.00	90.61	360.00	7,416.45	2,426.30	1,242.71	2,648.90	0.00	0.00	0.00
10,800.00	90.61	360.00	7,415.39	2,526.29	1,242.71	2,746.15	0.00	0.00	0.00
10,900.00	90.61	360.00	7,414.32	2,626.29	1,242.71	2,843.40	0.00	0.00	0.00
11,000.00	90.61	360.00	7,413.26	2,726.28	1,242.71	2,940.65	0.00	0.00	0.00
11,100.00	90.61	360.00	7,412.20	2,826.27	1,242.71	3,037.89	0.00	0.00	0.00
11,200.00	90.61	360.00	7,411.13	2,926.27	1,242.71	3,135.14	0.00	0.00	0.00
11,300.00	90.61	360.00	7,410.07	3,026.26	1,242.71	3,232.39	0.00	0.00	0.00
11,400.00	90.61	360.00	7,409.00	3,126.26	1,242.71	3,329.64	0.00	0.00	0.00
11,500.00	90.61	360.00	7,407.94	3,226.25	1,242.71	3,426.89	0.00	0.00	0.00
11,600.00	90.61	360.00	7,406.87	3,326.25	1,242.71	3,524.13	0.00	0.00	0.00
11,700.00	90.61	360.00	7,405.81	3,426.24	1,242.71	3,621.38	0.00	0.00	0.00
11,800.00	90.61	360.00	7,404.74	3,526.23	1,242.71	3,718.63	0.00	0.00	0.00
11,900.00	90.61	360.00	7,403.68	3,626.23	1,242.71	3,815.88	0.00	0.00	0.00
12,000.00	90.61	360.00	7,402.61	3,726.22	1,242.71	3,913.13	0.00	0.00	0.00
12,100.00	90.61	360.00	7,401.55	3,826.22	1,242.71	4,010.38	0.00	0.00	0.00
12,200.00	90.61	360.00	7,400.48	3,926.21	1,242.71	4,107.62	0.00	0.00	0.00
12,300.00	90.61	360.00	7,399.42	4,026.21	1,242.71	4,204.87	0.00	0.00	0.00
12,400.00	90.61	360.00	7,398.36	4,126.20	1,242.71	4,302.12	0.00	0.00	0.00
12,500.00	90.61	360.00	7,397.29	4,226.20	1,242.71	4,399.37	0.00	0.00	0.00
12,600.00	90.61	360.00	7,396.23	4,326.19	1,242.71	4,496.62	0.00	0.00	0.00
12,700.00	90.61	360.00	7,395.16	4,426.18	1,242.71	4,593.87	0.00	0.00	0.00
12,800.00	90.61	360.00	7,394.10	4,526.18	1,242.71	4,691.11	0.00	0.00	0.00
12,900.00	90.61	360.00	7,393.03	4,626.17	1,242.71	4,788.36	0.00	0.00	0.00
13,000.00	90.61	360.00	7,391.97	4,726.17	1,242.71	4,885.61	0.00	0.00	0.00
13,100.00	90.61	360.00	7,390.90	4,826.16	1,242.71	4,982.86	0.00	0.00	0.00
13,200.00	90.61	360.00	7,389.84	4,926.16	1,242.71	5,080.11	0.00	0.00	0.00

# Anadarko

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well WHISTON 39C-33HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB @ 4904.00usft (D Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB @ 4904.00usft (D Rig)
<b>Site:</b>	2N-67W-04 Whiston Pad	<b>North Reference:</b>	True
<b>Well:</b>	WHISTON 39C-33HZ	<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)	
13,300.00	90.61	360.00	7,388.77	5,026.15	1,242.71	5,177.35	0.00	0.00	0.00	
13,400.00	90.61	360.00	7,387.71	5,126.14	1,242.71	5,274.60	0.00	0.00	0.00	
13,466.58	90.61	360.00	7,387.00	5,192.72	1,242.71	5,339.35	0.00	0.00	0.00	
Whiston 39C-33HZ_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										
Whiston 39C-33HZ_P	0.00	0.00	7,387.00	5,192.72	1,242.71	14,593,067.00	1,671,978.00	40.182107	-104.887001	
- plan hits target center										
- Point										
WHISTON 39C-33HZ	0.00	0.00	7,444.51	-208.60	1,242.71	14,587,665.68	1,671,984.60	40.167274	-104.887002	
- plan hits target center										
- Point										

Casing Points									
Measured Depth (usft)	Vertical Depth (usft)	Name			Casing Diameter (")	Hole Diameter (")			
1,511.79	1,500.00	9 5/8"			9-5/8	13-1/32			
8,064.95	7,444.51	Top of Production			5-1/2	8-1/2			

Formations									
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)				
953.06	952.00	Fox Hills							
4,049.03	3,871.00	Parkman							
4,495.56	4,287.00	Sussex							
7,350.41	7,090.00	Sharon Springs							
7,453.10	7,178.00	Niobrara							
7,520.94	7,231.00	Nio B							
7,597.48	7,285.00	Nio C							
7,860.17	7,414.00	Fort Hayes							
7,947.80	7,435.00	Codell							