

# **US ROCKIES WATTENBERG PLANNING**

**WELD-NAD83-UTMFT13N**

**2N-65W-25 George 7-25HZ Pad**

**GEORGE 25-3HZ**

**Plan A**

**Plan: Permit Rev-1**

SHL Latitude/Longitude: 40.110455/-104.610083

Survey Program: MWD+IFR

## **Standard Planning Report**

**18 August, 2017**



## FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1369.00	1385.66	Fox Hills
3964.00	4312.45	Parkman
4417.00	4830.39	Sussex
6796.00	7285.04	Sharon Springs
6836.00	7329.61	Niobrara
6917.00	7425.75	Nio B
6990.00	7522.87	Nio C
7135.00	7798.40	Fort Hayes
7161.00	7897.98	Codell

## CASING DETAILS

TVD	MD	Name	Size
1500.00	1523.46	9 5/8" Csg	9-5/8
7172.00	8018.12	Top of Production	5-1/2



Azimuths to True North  
Magnetic North: 7.93°

Magnetic Field  
Strength: 52345.2snT  
Dip Angle: 66.63°  
Date: 8/16/2017  
Model: IGRF2010

SITE: 2N-65W-25 George 7-25HZ Pad

Well: GEORGE 25-3HZ  
Wellbore: Plan A  
Design: Permit Rev-1

## WELL DETAILS: GEORGE 25-3HZ

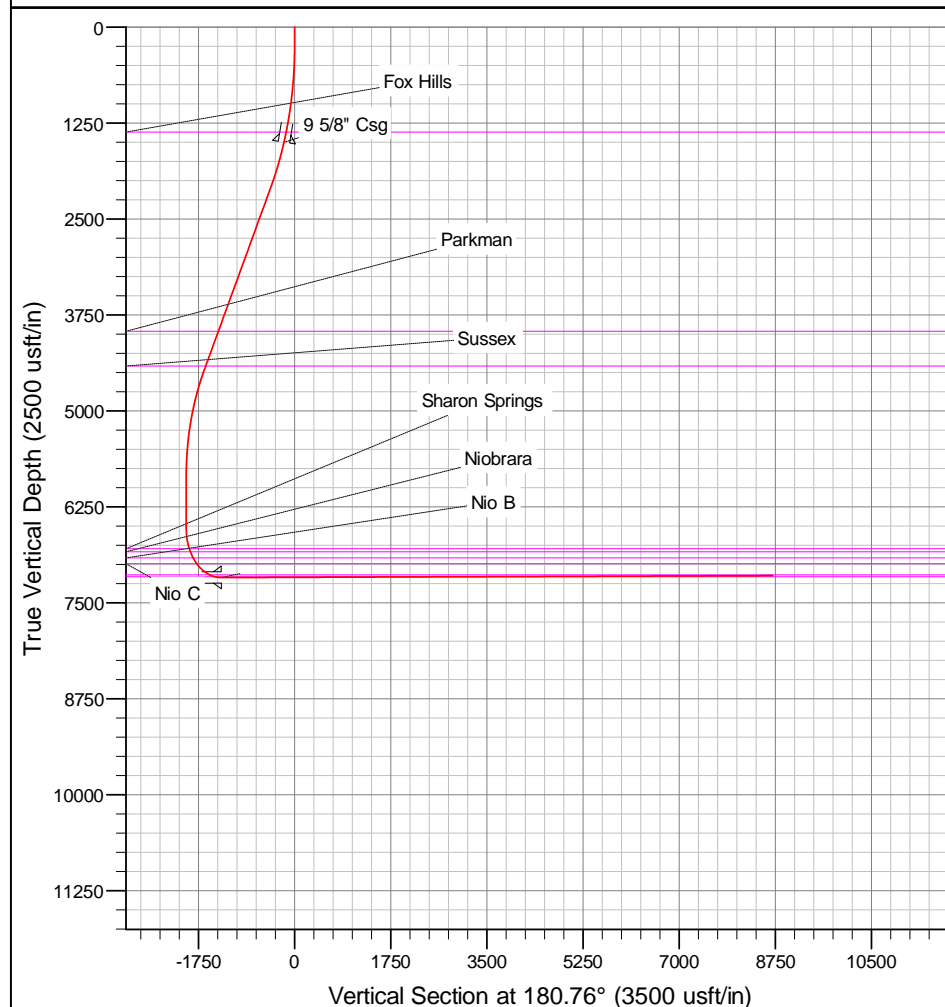
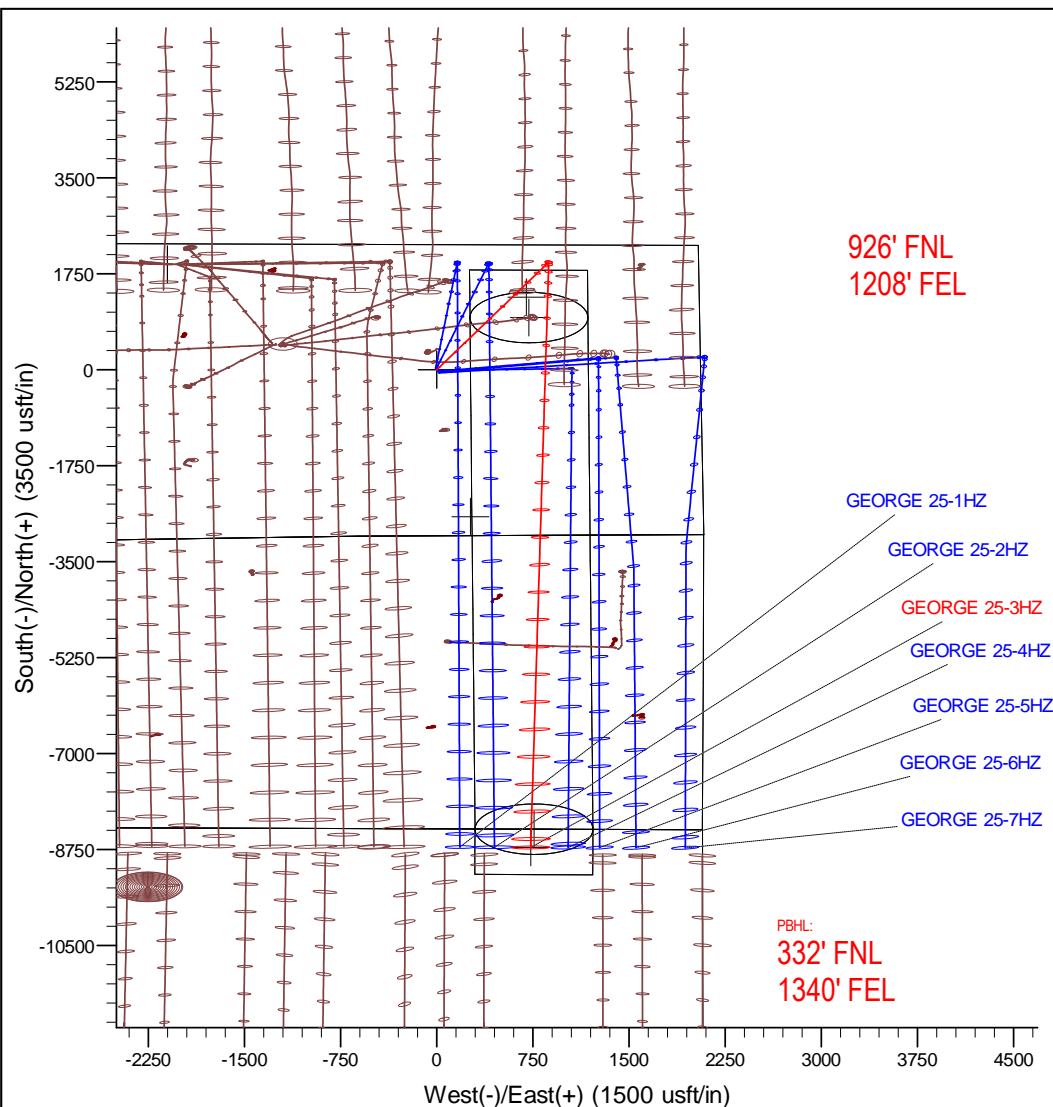
+N/-S	+E/-W	GL: 4900.00 Northing	RKB = 17 @ 4917.00usft (Drilling Rig) Easting	Latitude	Longitude	Slot
0.00	0.00	14567193.99	1749437.29	40.110455	-104.610083	

## DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
GEORGE 25-3HZ_BHL7147.00		-8711.28	732.52	14558486.00	1750208.00	40.086533	-104.607464

## 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
2183.33	29.00	24.00	2101.84	437.51	194.79	1.50	-440.06
4883.33	29.00	24.00	4463.31	1633.33	727.21	0.00	-1642.83
6333.33	0.00	0.00	5852.19	1961.47	873.30	2.00	-1972.88
7016.53	0.00	0.00	6535.39	1961.47	873.30	0.00	-1972.88
8018.12	90.14	180.76	7172.00	1323.32	864.88	9.00	-1334.67
18053.62	90.14	180.76	7147.00	-8711.28	732.52	0.00	8700.80



## Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well GEORGE 25-3HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17 @ 4917.00usft (Drilling Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17 @ 4917.00usft (Drilling Rig)
<b>Site:</b>	2N-65W-25 George 7-25HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	GEORGE 25-3HZ	<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-65W-25 George 7-25HZ Pad				
Site Position:		Northing:	14,567,222.71 usft	Latitude:	40.110534
From:	Lat/Long	Easting:	1,749,428.22 usft	Longitude:	-104.610115
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.25

Well	GEORGE 25-3HZ					
Well Position	+N/-S	-28.77 usft	Northing:	14,567,193.98 usft	Latitude:	40.110455
	+E/-W	8.95 usft	Easting:	1,749,437.29 usft	Longitude:	-104.610083
Position Uncertainty		3.28 usft	Wellhead Elevation:		Ground Level:	4,900.00 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	8/16/2017	7.93	66.63	52,345.22511788

<b>Design</b>	Permit Rev-1				
<b>Audit Notes:</b>					
<b>Version:</b>		<b>Phase:</b>	PLAN	<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	180.76	

<b>Plan Survey Tool Program</b>		<b>Date</b>	8/18/2017		
<b>Depth From (usft)</b>	<b>Depth To (usft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Remarks</b>	
1	0.00	1,500.00	Permit Rev-1 (Plan A)	APC_ISCWSA REV 2 MWD+II Fixed:v2:crustal field declinatio	
2	1,500.00	18,053.62	Permit Rev-1 (Plan A)	APC_ISCWSA REV 2 MWD+II Fixed:v2:crustal field declinatio	

# Corporate

## Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well GEORGE 25-3HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17 @ 4917.00usft (Drilling Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17 @ 4917.00usft (Drilling Rig)
<b>Site:</b>	2N-65W-25 George 7-25HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	GEORGE 25-3HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-1		

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	
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,183.33	29.00	24.00	2,101.84	437.51	194.79	1.50	1.50	0.00	24.00	
4,883.33	29.00	24.00	4,463.31	1,633.33	727.21	0.00	0.00	0.00	0.00	
6,333.33	0.00	0.00	5,852.19	1,961.47	873.30	2.00	-2.00	-1.66	-180.00	
7,016.53	0.00	0.00	6,535.39	1,961.47	873.30	0.00	0.00	0.00	0.00	
8,018.12	90.14	180.76	7,172.00	1,323.32	864.88	9.00	9.00	-17.90	180.76	
18,053.62	90.14	180.76	7,147.00	-8,711.28	732.52	0.00	0.00	0.00	0.00	GEORGE 25-3HZ_BH

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well GEORGE 25-3HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17 @ 4917.00usft (Drilling Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17 @ 4917.00usft (Drilling Rig)
<b>Site:</b>	2N-65W-25 George 7-25HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	GEORGE 25-3HZ	<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
Start Build 1.50									
300.00	0.75	24.00	300.00	0.30	0.13	-0.30	1.50	1.50	0.00
400.00	2.25	24.00	399.96	2.69	1.20	-2.71	1.50	1.50	0.00
500.00	3.75	24.00	499.82	7.47	3.33	-7.51	1.50	1.50	0.00
600.00	5.25	24.00	599.51	14.64	6.52	-14.72	1.50	1.50	0.00
700.00	6.75	24.00	698.96	24.19	10.77	-24.33	1.50	1.50	0.00
800.00	8.25	24.00	798.10	36.11	16.08	-36.32	1.50	1.50	0.00
900.00	9.75	24.00	896.87	50.40	22.44	-50.70	1.50	1.50	0.00
1,000.00	11.25	24.00	995.19	67.05	29.85	-67.44	1.50	1.50	0.00
1,100.00	12.75	24.00	1,093.00	86.04	38.31	-86.54	1.50	1.50	0.00
1,200.00	14.25	24.00	1,190.24	107.37	47.80	-107.99	1.50	1.50	0.00
1,300.00	15.75	24.00	1,286.83	131.01	58.33	-131.77	1.50	1.50	0.00
1,385.66	17.03	24.00	1,369.00	153.10	68.16	-153.99	1.50	1.50	0.00
Fox Hills									
1,400.00	17.25	24.00	1,382.71	156.96	69.88	-157.87	1.50	1.50	0.00
1,500.00	18.75	24.00	1,477.81	185.19	82.45	-186.26	1.50	1.50	0.00
1,523.46	19.10	24.00	1,500.00	192.14	85.55	-193.26	1.50	1.50	0.00
9 5/8" Csg									
1,600.00	20.25	24.00	1,572.07	215.68	96.03	-216.94	1.50	1.50	0.00
1,700.00	21.75	24.00	1,665.43	248.42	110.60	-249.86	1.50	1.50	0.00
1,800.00	23.25	24.00	1,757.81	283.38	126.17	-285.03	1.50	1.50	0.00
1,900.00	24.75	24.00	1,849.16	320.53	142.71	-322.40	1.50	1.50	0.00
2,000.00	26.25	24.00	1,939.42	359.86	160.22	-361.95	1.50	1.50	0.00
2,100.00	27.75	24.00	2,028.52	401.33	178.69	-403.67	1.50	1.50	0.00
2,183.33	29.00	24.00	2,101.84	437.51	194.79	-440.06	1.50	1.50	0.00
Start 2700.00 hold at 2183.33 MD									
2,200.00	29.00	24.00	2,116.41	444.89	198.08	-447.48	0.00	0.00	0.00
2,300.00	29.00	24.00	2,203.88	489.18	217.80	-492.03	0.00	0.00	0.00
2,400.00	29.00	24.00	2,291.34	533.47	237.52	-536.58	0.00	0.00	0.00
2,500.00	29.00	24.00	2,378.80	577.76	257.24	-581.12	0.00	0.00	0.00
2,600.00	29.00	24.00	2,466.26	622.05	276.96	-625.67	0.00	0.00	0.00
2,700.00	29.00	24.00	2,553.72	666.34	296.67	-670.22	0.00	0.00	0.00
2,800.00	29.00	24.00	2,641.19	710.63	316.39	-714.77	0.00	0.00	0.00
2,900.00	29.00	24.00	2,728.65	754.92	336.11	-759.31	0.00	0.00	0.00
3,000.00	29.00	24.00	2,816.11	799.21	355.83	-803.86	0.00	0.00	0.00
3,100.00	29.00	24.00	2,903.57	843.50	375.55	-848.41	0.00	0.00	0.00
3,200.00	29.00	24.00	2,991.03	887.79	395.27	-892.95	0.00	0.00	0.00
3,300.00	29.00	24.00	3,078.50	932.08	414.99	-937.50	0.00	0.00	0.00
3,400.00	29.00	24.00	3,165.96	976.37	434.71	-982.05	0.00	0.00	0.00
3,500.00	29.00	24.00	3,253.42	1,020.66	454.43	-1,026.60	0.00	0.00	0.00
3,600.00	29.00	24.00	3,340.88	1,064.95	474.15	-1,071.14	0.00	0.00	0.00
3,700.00	29.00	24.00	3,428.34	1,109.24	493.86	-1,115.69	0.00	0.00	0.00
3,800.00	29.00	24.00	3,515.80	1,153.53	513.58	-1,160.24	0.00	0.00	0.00
3,900.00	29.00	24.00	3,603.27	1,197.82	533.30	-1,204.79	0.00	0.00	0.00
4,000.00	29.00	24.00	3,690.73	1,242.11	553.02	-1,249.33	0.00	0.00	0.00
4,100.00	29.00	24.00	3,778.19	1,286.40	572.74	-1,293.88	0.00	0.00	0.00
4,200.00	29.00	24.00	3,865.65	1,330.69	592.46	-1,338.43	0.00	0.00	0.00
4,300.00	29.00	24.00	3,953.11	1,374.98	612.18	-1,382.97	0.00	0.00	0.00
4,312.45	29.00	24.00	3,964.00	1,380.49	614.63	-1,388.52	0.00	0.00	0.00
Parkman									

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well GEORGE 25-3HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17 @ 4917.00usft (Drilling Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17 @ 4917.00usft (Drilling Rig)
<b>Site:</b>	2N-65W-25 George 7-25HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	GEORGE 25-3HZ	<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)
4,400.00	29.00	24.00	4,040.58	1,419.26	631.90	-1,427.52	0.00	0.00	0.00
4,500.00	29.00	24.00	4,128.04	1,463.55	651.62	-1,472.07	0.00	0.00	0.00
4,600.00	29.00	24.00	4,215.50	1,507.84	671.34	-1,516.62	0.00	0.00	0.00
4,700.00	29.00	24.00	4,302.96	1,552.13	691.05	-1,561.16	0.00	0.00	0.00
4,800.00	29.00	24.00	4,390.42	1,596.42	710.77	-1,605.71	0.00	0.00	0.00
4,830.39	29.00	24.00	4,417.00	1,609.88	716.77	-1,619.25	0.00	0.00	0.00
<b>Sussex</b>									
4,883.33	29.00	24.00	4,463.31	1,633.33	727.21	-1,642.83	0.00	0.00	0.00
<b>Start DLS 2.00 TFO -180.00</b>									
4,900.00	28.67	24.00	4,477.91	1,640.67	730.48	-1,650.22	2.00	-2.00	0.00
5,000.00	26.67	24.00	4,566.47	1,683.09	749.36	-1,692.88	2.00	-2.00	0.00
5,100.00	24.67	24.00	4,656.60	1,722.66	766.98	-1,732.68	2.00	-2.00	0.00
5,200.00	22.67	24.00	4,748.19	1,759.33	783.30	-1,769.56	2.00	-2.00	0.00
5,300.00	20.67	24.00	4,841.12	1,793.05	798.32	-1,803.48	2.00	-2.00	0.00
5,400.00	18.67	24.00	4,935.28	1,823.80	812.01	-1,834.41	2.00	-2.00	0.00
5,500.00	16.67	24.00	5,030.56	1,851.52	824.35	-1,862.29	2.00	-2.00	0.00
5,600.00	14.67	24.00	5,126.84	1,876.19	835.33	-1,887.10	2.00	-2.00	0.00
5,700.00	12.67	24.00	5,224.00	1,897.77	844.94	-1,908.81	2.00	-2.00	0.00
5,800.00	10.67	24.00	5,321.93	1,916.24	853.17	-1,927.39	2.00	-2.00	0.00
5,900.00	8.67	24.00	5,420.50	1,931.58	860.00	-1,942.82	2.00	-2.00	0.00
6,000.00	6.67	24.00	5,519.61	1,943.77	865.42	-1,955.08	2.00	-2.00	0.00
6,100.00	4.67	24.00	5,619.11	1,952.79	869.44	-1,964.15	2.00	-2.00	0.00
6,200.00	2.67	24.00	5,718.90	1,958.63	872.04	-1,970.03	2.00	-2.00	0.00
6,300.00	0.67	24.00	5,818.85	1,961.29	873.22	-1,972.70	2.00	-2.00	0.00
6,333.33	0.00	0.00	5,852.19	1,961.47	873.30	-1,972.88	2.00	-2.00	-72.00
<b>Start 683.20 hold at 6333.33 MD</b>									
6,400.00	0.00	0.00	5,918.85	1,961.47	873.30	-1,972.88	0.00	0.00	0.00
6,500.00	0.00	0.00	6,018.85	1,961.47	873.30	-1,972.88	0.00	0.00	0.00
6,600.00	0.00	0.00	6,118.85	1,961.47	873.30	-1,972.88	0.00	0.00	0.00
6,700.00	0.00	0.00	6,218.85	1,961.47	873.30	-1,972.88	0.00	0.00	0.00
6,800.00	0.00	0.00	6,318.85	1,961.47	873.30	-1,972.88	0.00	0.00	0.00
6,900.00	0.00	0.00	6,418.85	1,961.47	873.30	-1,972.88	0.00	0.00	0.00
7,000.00	0.00	0.00	6,518.85	1,961.47	873.30	-1,972.88	0.00	0.00	0.00
7,016.53	0.00	0.00	6,535.39	1,961.47	873.30	-1,972.88	0.00	0.00	0.00
<b>KOP @ 7016.53ft</b>									
7,100.00	7.51	180.76	6,618.61	1,956.00	873.23	-1,967.41	9.00	9.00	-214.75
7,200.00	16.51	180.76	6,716.32	1,935.21	872.95	-1,946.62	9.00	9.00	0.00
7,300.00	25.51	180.76	6,809.58	1,899.40	872.48	-1,910.80	9.00	9.00	0.00
7,377.12	32.45	180.76	6,877.00	1,862.06	871.99	-1,873.46	9.00	9.00	0.00
<b>Sharon Springs</b>									
7,400.00	34.51	180.76	6,896.08	1,849.44	871.82	-1,860.84	9.00	9.00	0.00
7,425.75	36.83	180.76	6,917.00	1,834.42	871.63	-1,845.82	9.00	9.00	0.00
<b>Niobrara</b>									
7,500.00	43.51	180.76	6,973.70	1,786.56	870.99	-1,797.95	9.00	9.00	0.00
7,522.87	45.57	180.76	6,990.00	1,770.52	870.78	-1,781.92	9.00	9.00	0.00
<b>Nio B</b>									
7,550.00	48.01	180.76	7,008.58	1,750.75	870.52	-1,762.14	9.00	9.00	0.00
<b>DLS = 9°/100'</b>									
7,600.00	52.51	180.76	7,040.53	1,712.31	870.01	-1,723.70	9.00	9.00	0.00
7,700.00	61.51	180.76	7,094.92	1,628.53	868.91	-1,639.91	9.00	9.00	0.00
7,800.00	70.51	180.76	7,135.54	1,537.27	867.71	-1,548.64	9.00	9.00	0.00
7,897.98	79.33	180.76	7,161.00	1,442.76	866.46	-1,454.12	9.00	9.00	0.00
<b>Nio C</b>									

## Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well GEORGE 25-3HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17 @ 4917.00usft (Drilling Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17 @ 4917.00usft (Drilling Rig)
<b>Site:</b>	2N-65W-25 George 7-25HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	GEORGE 25-3HZ	<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)
7,900.00	79.51	180.76	7,161.37	1,440.77	866.43	-1,452.14	9.00	9.00	0.00
8,000.00	88.51	180.76	7,171.79	1,341.43	865.12	-1,352.79	9.00	9.00	0.00
8,018.12	90.14	180.76	7,172.00	1,323.31	864.88	-1,334.67	9.00	9.00	0.00
End Build @ 8018.12ft - Top of Production									
8,100.00	90.14	180.76	7,171.80	1,241.44	863.80	-1,252.79	0.00	0.00	0.00
8,200.00	90.14	180.76	7,171.55	1,141.45	862.48	-1,152.79	0.00	0.00	0.00
8,300.00	90.14	180.76	7,171.30	1,041.46	861.17	-1,052.79	0.00	0.00	0.00
8,400.00	90.14	180.76	7,171.05	941.47	859.85	-952.79	0.00	0.00	0.00
8,500.00	90.14	180.76	7,170.80	841.48	858.53	-852.79	0.00	0.00	0.00
8,600.00	90.14	180.76	7,170.55	741.49	857.21	-752.79	0.00	0.00	0.00
8,700.00	90.14	180.76	7,170.31	641.50	855.89	-652.79	0.00	0.00	0.00
8,800.00	90.14	180.76	7,170.06	541.51	854.57	-552.79	0.00	0.00	0.00
8,900.00	90.14	180.76	7,169.81	441.51	853.25	-452.79	0.00	0.00	0.00
9,000.00	90.14	180.76	7,169.56	341.52	851.93	-352.79	0.00	0.00	0.00
9,100.00	90.14	180.76	7,169.31	241.53	850.61	-252.79	0.00	0.00	0.00
9,200.00	90.14	180.76	7,169.06	141.54	849.29	-152.79	0.00	0.00	0.00
9,300.00	90.14	180.76	7,168.81	41.55	847.98	-52.79	0.00	0.00	0.00
9,400.00	90.14	180.76	7,168.56	-58.44	846.66	47.21	0.00	0.00	0.00
9,500.00	90.14	180.76	7,168.31	-158.43	845.34	147.21	0.00	0.00	0.00
9,600.00	90.14	180.76	7,168.06	-258.42	844.02	247.20	0.00	0.00	0.00
9,700.00	90.14	180.76	7,167.81	-358.41	842.70	347.20	0.00	0.00	0.00
9,800.00	90.14	180.76	7,167.56	-458.40	841.38	447.20	0.00	0.00	0.00
9,900.00	90.14	180.76	7,167.32	-558.40	840.06	547.20	0.00	0.00	0.00
10,000.00	90.14	180.76	7,167.07	-658.39	838.74	647.20	0.00	0.00	0.00
10,100.00	90.14	180.76	7,166.82	-758.38	837.42	747.20	0.00	0.00	0.00
10,200.00	90.14	180.76	7,166.57	-858.37	836.11	847.20	0.00	0.00	0.00
10,300.00	90.14	180.76	7,166.32	-958.36	834.79	947.20	0.00	0.00	0.00
10,400.00	90.14	180.76	7,166.07	-1,058.35	833.47	1,047.20	0.00	0.00	0.00
10,500.00	90.14	180.76	7,165.82	-1,158.34	832.15	1,147.20	0.00	0.00	0.00
10,600.00	90.14	180.76	7,165.57	-1,258.33	830.83	1,247.20	0.00	0.00	0.00
10,700.00	90.14	180.76	7,165.32	-1,358.32	829.51	1,347.20	0.00	0.00	0.00
10,800.00	90.14	180.76	7,165.07	-1,458.31	828.19	1,447.20	0.00	0.00	0.00
10,900.00	90.14	180.76	7,164.82	-1,558.31	826.87	1,547.20	0.00	0.00	0.00
11,000.00	90.14	180.76	7,164.58	-1,658.30	825.55	1,647.20	0.00	0.00	0.00
11,100.00	90.14	180.76	7,164.33	-1,758.29	824.23	1,747.20	0.00	0.00	0.00
11,200.00	90.14	180.76	7,164.08	-1,858.28	822.92	1,847.20	0.00	0.00	0.00
11,300.00	90.14	180.76	7,163.83	-1,958.27	821.60	1,947.20	0.00	0.00	0.00
11,400.00	90.14	180.76	7,163.58	-2,058.26	820.28	2,047.20	0.00	0.00	0.00
11,500.00	90.14	180.76	7,163.33	-2,158.25	818.96	2,147.20	0.00	0.00	0.00
11,600.00	90.14	180.76	7,163.08	-2,258.24	817.64	2,247.20	0.00	0.00	0.00
11,700.00	90.14	180.76	7,162.83	-2,358.23	816.32	2,347.20	0.00	0.00	0.00
11,800.00	90.14	180.76	7,162.58	-2,458.22	815.00	2,447.20	0.00	0.00	0.00
11,900.00	90.14	180.76	7,162.33	-2,558.22	813.68	2,547.20	0.00	0.00	0.00
12,000.00	90.14	180.76	7,162.08	-2,658.21	812.36	2,647.20	0.00	0.00	0.00
12,100.00	90.14	180.76	7,161.83	-2,758.20	811.05	2,747.20	0.00	0.00	0.00
12,200.00	90.14	180.76	7,161.59	-2,858.19	809.73	2,847.20	0.00	0.00	0.00
12,300.00	90.14	180.76	7,161.34	-2,958.18	808.41	2,947.20	0.00	0.00	0.00
12,400.00	90.14	180.76	7,161.09	-3,058.17	807.09	3,047.20	0.00	0.00	0.00
12,500.00	90.14	180.76	7,160.84	-3,158.16	805.77	3,147.20	0.00	0.00	0.00
12,600.00	90.14	180.76	7,160.59	-3,258.15	804.45	3,247.20	0.00	0.00	0.00
12,700.00	90.14	180.76	7,160.34	-3,358.14	803.13	3,347.20	0.00	0.00	0.00
12,800.00	90.14	180.76	7,160.09	-3,458.13	801.81	3,447.19	0.00	0.00	0.00
12,900.00	90.14	180.76	7,159.84	-3,558.13	800.49	3,547.19	0.00	0.00	0.00

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well GEORGE 25-3HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17 @ 4917.00usft (Drilling Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17 @ 4917.00usft (Drilling Rig)
<b>Site:</b>	2N-65W-25 George 7-25HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	GEORGE 25-3HZ	<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)
13,000.00	90.14	180.76	7,159.59	-3,658.12	799.17	3,647.19	0.00	0.00	0.00
13,100.00	90.14	180.76	7,159.34	-3,758.11	797.86	3,747.19	0.00	0.00	0.00
13,200.00	90.14	180.76	7,159.09	-3,858.10	796.54	3,847.19	0.00	0.00	0.00
13,300.00	90.14	180.76	7,158.84	-3,958.09	795.22	3,947.19	0.00	0.00	0.00
13,400.00	90.14	180.76	7,158.60	-4,058.08	793.90	4,047.19	0.00	0.00	0.00
13,500.00	90.14	180.76	7,158.35	-4,158.07	792.58	4,147.19	0.00	0.00	0.00
13,600.00	90.14	180.76	7,158.10	-4,258.06	791.26	4,247.19	0.00	0.00	0.00
13,700.00	90.14	180.76	7,157.85	-4,358.05	789.94	4,347.19	0.00	0.00	0.00
13,800.00	90.14	180.76	7,157.60	-4,458.04	788.62	4,447.19	0.00	0.00	0.00
13,900.00	90.14	180.76	7,157.35	-4,558.04	787.30	4,547.19	0.00	0.00	0.00
14,000.00	90.14	180.76	7,157.10	-4,658.03	785.99	4,647.19	0.00	0.00	0.00
14,100.00	90.14	180.76	7,156.85	-4,758.02	784.67	4,747.19	0.00	0.00	0.00
14,200.00	90.14	180.76	7,156.60	-4,858.01	783.35	4,847.19	0.00	0.00	0.00
14,300.00	90.14	180.76	7,156.35	-4,958.00	782.03	4,947.19	0.00	0.00	0.00
14,400.00	90.14	180.76	7,156.10	-5,057.99	780.71	5,047.19	0.00	0.00	0.00
14,500.00	90.14	180.76	7,155.85	-5,157.98	779.39	5,147.19	0.00	0.00	0.00
14,600.00	90.14	180.76	7,155.61	-5,257.97	778.07	5,247.19	0.00	0.00	0.00
14,700.00	90.14	180.76	7,155.36	-5,357.96	776.75	5,347.19	0.00	0.00	0.00
14,800.00	90.14	180.76	7,155.11	-5,457.95	775.43	5,447.19	0.00	0.00	0.00
14,900.00	90.14	180.76	7,154.86	-5,557.95	774.11	5,547.19	0.00	0.00	0.00
15,000.00	90.14	180.76	7,154.61	-5,657.94	772.80	5,647.19	0.00	0.00	0.00
15,100.00	90.14	180.76	7,154.36	-5,757.93	771.48	5,747.19	0.00	0.00	0.00
15,200.00	90.14	180.76	7,154.11	-5,857.92	770.16	5,847.19	0.00	0.00	0.00
15,300.00	90.14	180.76	7,153.86	-5,957.91	768.84	5,947.19	0.00	0.00	0.00
15,400.00	90.14	180.76	7,153.61	-6,057.90	767.52	6,047.19	0.00	0.00	0.00
15,500.00	90.14	180.76	7,153.36	-6,157.89	766.20	6,147.19	0.00	0.00	0.00
15,600.00	90.14	180.76	7,153.11	-6,257.88	764.88	6,247.19	0.00	0.00	0.00
15,700.00	90.14	180.76	7,152.86	-6,357.87	763.56	6,347.19	0.00	0.00	0.00
15,800.00	90.14	180.76	7,152.62	-6,457.86	762.24	6,447.19	0.00	0.00	0.00
15,900.00	90.14	180.76	7,152.37	-6,557.86	760.93	6,547.19	0.00	0.00	0.00
16,000.00	90.14	180.76	7,152.12	-6,657.85	759.61	6,647.19	0.00	0.00	0.00
16,100.00	90.14	180.76	7,151.87	-6,757.84	758.29	6,747.18	0.00	0.00	0.00
16,200.00	90.14	180.76	7,151.62	-6,857.83	756.97	6,847.18	0.00	0.00	0.00
16,300.00	90.14	180.76	7,151.37	-6,957.82	755.65	6,947.18	0.00	0.00	0.00
16,400.00	90.14	180.76	7,151.12	-7,057.81	754.33	7,047.18	0.00	0.00	0.00
16,500.00	90.14	180.76	7,150.87	-7,157.80	753.01	7,147.18	0.00	0.00	0.00
16,600.00	90.14	180.76	7,150.62	-7,257.79	751.69	7,247.18	0.00	0.00	0.00
16,700.00	90.14	180.76	7,150.37	-7,357.78	750.37	7,347.18	0.00	0.00	0.00
16,800.00	90.14	180.76	7,150.12	-7,457.77	749.05	7,447.18	0.00	0.00	0.00
16,900.00	90.14	180.76	7,149.87	-7,557.77	747.74	7,547.18	0.00	0.00	0.00
17,000.00	90.14	180.76	7,149.63	-7,657.76	746.42	7,647.18	0.00	0.00	0.00
17,100.00	90.14	180.76	7,149.38	-7,757.75	745.10	7,747.18	0.00	0.00	0.00
17,200.00	90.14	180.76	7,149.13	-7,857.74	743.78	7,847.18	0.00	0.00	0.00
17,300.00	90.14	180.76	7,148.88	-7,957.73	742.46	7,947.18	0.00	0.00	0.00
17,400.00	90.14	180.76	7,148.63	-8,057.72	741.14	8,047.18	0.00	0.00	0.00
17,500.00	90.14	180.76	7,148.38	-8,157.71	739.82	8,147.18	0.00	0.00	0.00
17,600.00	90.14	180.76	7,148.13	-8,257.70	738.50	8,247.18	0.00	0.00	0.00
17,700.00	90.14	180.76	7,147.88	-8,357.69	737.18	8,347.18	0.00	0.00	0.00
17,800.00	90.14	180.76	7,147.63	-8,457.68	735.87	8,447.18	0.00	0.00	0.00
17,900.00	90.14	180.76	7,147.38	-8,557.68	734.55	8,547.18	0.00	0.00	0.00
18,000.00	90.14	180.76	7,147.13	-8,657.67	733.23	8,647.18	0.00	0.00	0.00
18,053.62	90.14	180.76	7,147.00	-8,711.28	732.52	8,700.80	0.00	0.00	0.00
TD Well @ 18053.62ft									



## Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well GEORGE 25-3HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17 @ 4917.00usft (Drilling Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17 @ 4917.00usft (Drilling Rig)
<b>Site:</b>	2N-65W-25 George 7-25HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	GEORGE 25-3HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-1		

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,523.46	1,500.00	9 5/8" Csg	9-5/8	13-1/2	
8,018.12	7,172.00	Top of Production	5-1/2	7-7/8	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,385.66	1,369.00	Fox Hills				
4,312.45	3,964.00	Parkman				
4,830.39	4,417.00	Sussex				
7,377.12	6,877.00	Sharon Springs				
7,425.75	6,917.00	Niobrara				
7,522.87	6,990.00	Nio B				
7,897.98	7,161.00	Nio C				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
250.00	250.00	0.00	0.00	Start Build 1.50	
2,183.33	2,101.84	437.51	194.79	Start 2700.00 hold at 2183.33 MD	
4,883.33	4,463.31	1,633.33	727.21	Start DLS 2.00 TFO -180.00	
6,333.33	5,852.19	1,961.47	873.30	Start 683.20 hold at 6333.33 MD	
7,016.53	6,535.39	1,961.47	873.30	KOP @ 7016.53ft	
7,550.00	7,008.58	1,750.75	870.52	DLS = 9°/100'	
8,018.12	7,172.00	1,323.31	864.88	End Build @ 8018.12ft	
18,053.62	7,147.00	-8,711.28	732.52	TD Well @ 18053.62ft	