

# **US ROCKIES WATTENBERG PLANNING**

**WELD-NAD83-UTMFT13N  
1N-67W-07 BUDDY 17-7HZ PAD  
BUDDY 7-10HZ**

## **Plan A**

### **Plan: Permit Rev-2**

SHL Lat/Long: 40.070708/-104.927715  
Survey Program: MWD+IFR+MSA

## **Standard Planning Report**

**17 May, 2018**

Project: WELD-NAD83-UTMFT13N  
Site: 1N-67W-07 BUDDY 17-7HZ PAD  
Well: BUDDY 7-10HZ  
Wellbore: Plan A  
Design: Permit Rev-2

# US ROCKIES WATTENBERG PLANNING

CASING DETAILS			WELL DETAILS: BUDDY 7-10HZ GL = 5072.00 RKB = 17' @ 5089.00usft (Drilling Rig)
TVD	MD	Size	
1500.00 7652.00	1518.56 8151.49	9-5/8 5-1/2	

SECTION DETAILS										
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	230.00	0.00	0.00	230.00	0.00	0.00	0.00	0.00	0.00	
3	1110.00	13.20	270.75	1102.24	1.32	-100.91	1.50	270.75	0.95	
4	3910.00	13.20	270.75	3828.26	9.69	-740.24	0.00	0.00	6.98	
5	4570.00	0.00	0.00	4482.43	10.68	-815.92	2.00	180.00	7.69	
6	7023.38	0.00	0.00	6935.81	10.68	-815.92	0.00	0.00	7.69	
7	8151.49	90.25	359.54	7652.00	729.96	-821.74	8.00	359.54	726.95	
8	13500.20	90.25	359.54	7628.79	6078.45	-865.00	0.00	0.00	6075.24	BUDDY 7-10HZ_target
9	13603.66	90.25	1.09	7628.34	6181.91	-864.44	1.50	89.99	6178.70	
10	18288.84	90.25	1.09	7608.00	10866.19	-775.43	0.00	0.00	10863.27	BUDDY 7-10HZ_BHL

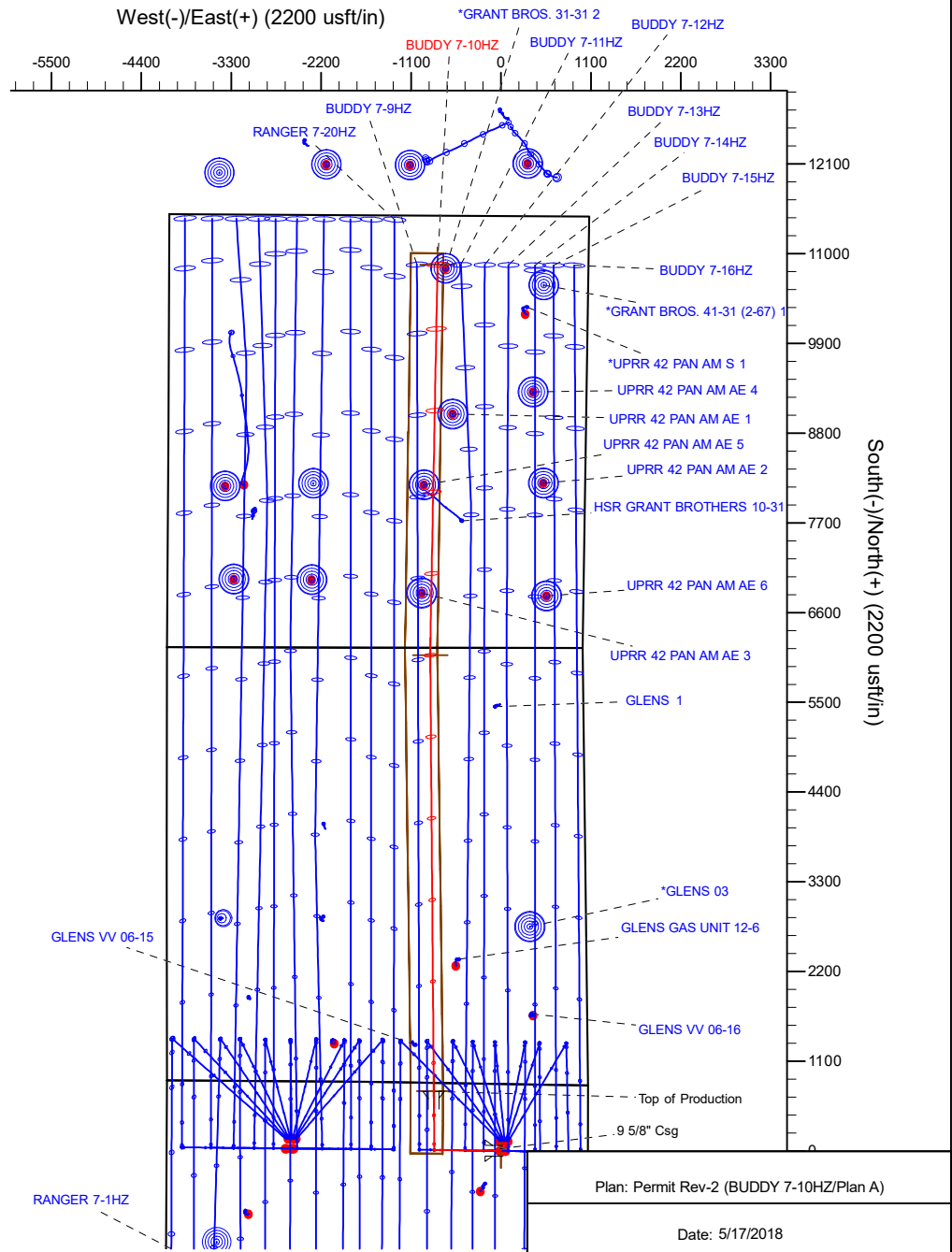
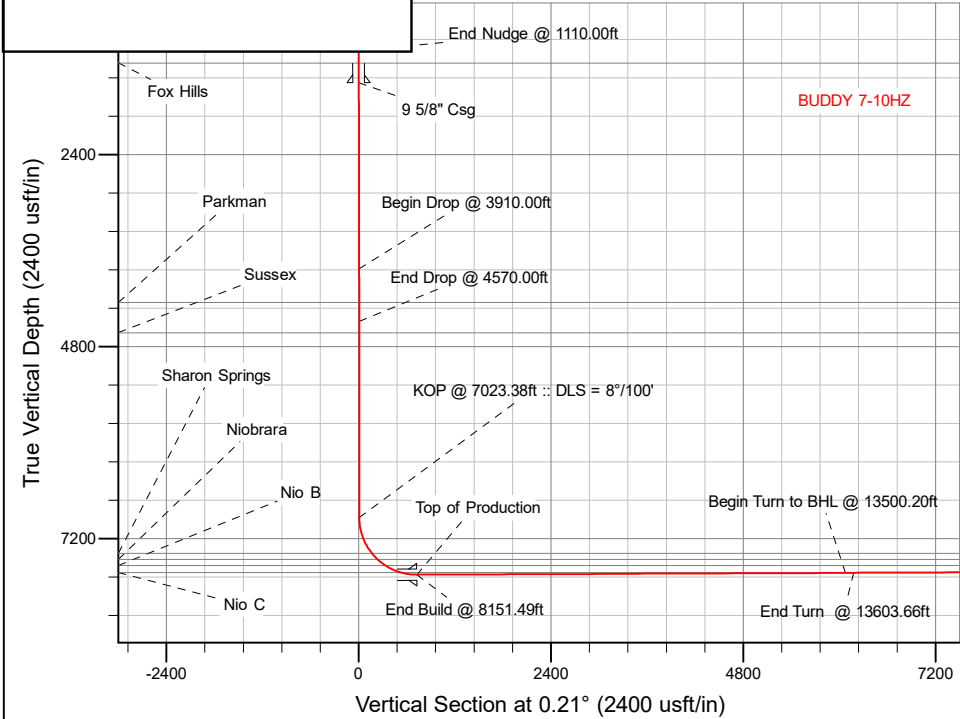
WELLBORE TARGET DETAILS (LAT/LONG)					
Name	TVD	+N/-S	+E/-W	Latitude	Longitude
BUDDY 7-10HZ_SHL	0.00	0.00	0.00	40.070708	-104.927715
BUDDY 7-10HZ_BHL	7608.00	10866.19	-775.43	40.100548	-104.930488

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
1252.00	1263.83	Fox Hills
4248.00	4335.30	Parkman
4627.00	4714.57	Sussex
7387.00	7511.48	Sharon Springs
7462.00	7614.40	Niobrara
7538.00	7738.70	Nio B
7624.00	7947.41	Nio C

**SHL**  
**819' FNL**  
**1065' FEL**

**HEEL**  
**101' FNL**  
**1885' FEL**

**TOE**  
**600' FNL**  
**1844' FEL**



# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well BUDDY 7-10HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 5089.00usft (Drilling Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 5089.00usft (Drilling Rig)
<b>Site:</b>	1N-67W-07 BUDDY 17-7HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	BUDDY 7-10HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-2		

<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)		

<b>Site</b>	1N-67W-07 BUDDY 17-7HZ PAD			
<b>Site Position:</b>		<b>Northing:</b>	14,552,609.64 usft	<b>Latitude:</b> 40.071038
<b>From:</b>	Lat/Long	<b>Easting:</b>	1,660,624.89 usft	<b>Longitude:</b> -104.927766
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b> 0.05 °

<b>Well</b>	BUDDY 7-10HZ			
<b>Well Position</b>	<b>+N/-S</b>	-120.17 usft	<b>Northing:</b>	14,552,489.48 usft
	<b>+E/-W</b>	14.27 usft	<b>Easting:</b>	1,660,639.25 usft
<b>Position Uncertainty</b>		3.28 usft	<b>Wellhead Elevation:</b>	<b>Ground Level:</b> 5,072.00 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>
	IGRF2015	5/2/2018	8.18	66.54	52,102.01532746

<b>Design</b>	Permit Rev-2			
<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	0.21

<b>Plan Survey Tool Program</b>	<b>Date</b>	5/17/2018		
<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-2 (Plan A)	APC_ISCWSA REV 2 MWD+II Fixed:v2:crustal field declinatio
2	1,500.00	18,288.84	Permit Rev-2 (Plan A)	APC_ISCWSA REV 2 MWD+II Fixed:v2:Rockies, crustal dec +

Corporate  
Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BUDDY 7-10HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5089.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5089.00usft (Drilling Rig)
Site:	1N-67W-07 BUDDY 17-7HZ PAD	North Reference:	True
Well:	BUDDY 7-10HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

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	
230.00	0.00	0.00	230.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,110.00	13.20	270.75	1,102.24	1.32	-100.91	1.50	1.50	0.00	270.75	
3,910.00	13.20	270.75	3,828.26	9.69	-740.24	0.00	0.00	0.00	0.00	
4,570.00	0.00	0.00	4,482.43	10.68	-815.92	2.00	-2.00	13.52	180.00	
7,023.38	0.00	0.00	6,935.81	10.68	-815.92	0.00	0.00	0.00	0.00	
8,151.49	90.25	359.54	7,652.00	729.96	-821.74	8.00	8.00	-0.04	359.54	
13,500.20	90.25	359.54	7,628.79	6,078.45	-865.00	0.00	0.00	0.00	0.00	BUDDY 7-10HZ_target
13,603.66	90.25	1.09	7,628.34	6,181.91	-864.44	1.50	0.00	1.50	89.99	
18,288.84	90.25	1.09	7,608.00	10,866.19	-775.43	0.00	0.00	0.00	0.00	BUDDY 7-10HZ_BHL

# Corporate Planning Report

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<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 5089.00usft (Drilling Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 5089.00usft (Drilling Rig)
<b>Site:</b>	1N-67W-07 BUDDY 17-7HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	BUDDY 7-10HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-2		

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
230.00	0.00	0.00	230.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 230.00ft									
300.00	1.05	270.75	300.00	0.01	-0.64	0.01	1.50	1.50	0.00
400.00	2.55	270.75	399.94	0.05	-3.78	0.04	1.50	1.50	0.00
500.00	4.05	270.75	499.78	0.12	-9.54	0.09	1.50	1.50	0.00
600.00	5.55	270.75	599.42	0.23	-17.90	0.17	1.50	1.50	0.00
700.00	7.05	270.75	698.81	0.38	-28.88	0.27	1.50	1.50	0.00
800.00	8.55	270.75	797.89	0.56	-42.45	0.40	1.50	1.50	0.00
900.00	10.05	270.75	896.57	0.77	-58.61	0.55	1.50	1.50	0.00
1,000.00	11.55	270.75	994.80	1.01	-77.34	0.73	1.50	1.50	0.00
1,100.00	13.05	270.75	1,092.50	1.29	-98.64	0.93	1.50	1.50	0.00
1,110.00	13.20	270.75	1,102.24	1.32	-100.91	0.95	1.50	1.50	0.00
End Nudge @ 1110.00ft									
1,200.00	13.20	270.75	1,189.86	1.59	-121.46	1.14	0.00	0.00	0.00
1,263.83	13.20	270.75	1,252.00	1.78	-136.04	1.28	0.00	0.00	0.00
Fox Hills									
1,300.00	13.20	270.75	1,287.22	1.89	-144.30	1.36	0.00	0.00	0.00
1,400.00	13.20	270.75	1,384.57	2.19	-167.13	1.58	0.00	0.00	0.00
1,500.00	13.20	270.75	1,481.93	2.49	-189.96	1.79	0.00	0.00	0.00
1,518.56	13.20	270.75	1,500.00	2.54	-194.20	1.83	0.00	0.00	0.00
9 5/8" Csg									
1,600.00	13.20	270.75	1,579.29	2.79	-212.79	2.01	0.00	0.00	0.00
1,700.00	13.20	270.75	1,676.65	3.08	-235.63	2.22	0.00	0.00	0.00
1,800.00	13.20	270.75	1,774.01	3.38	-258.46	2.44	0.00	0.00	0.00
1,900.00	13.20	270.75	1,871.36	3.68	-281.29	2.65	0.00	0.00	0.00
2,000.00	13.20	270.75	1,968.72	3.98	-304.13	2.87	0.00	0.00	0.00
2,100.00	13.20	270.75	2,066.08	4.28	-326.96	3.08	0.00	0.00	0.00
2,200.00	13.20	270.75	2,163.44	4.58	-349.79	3.30	0.00	0.00	0.00
2,300.00	13.20	270.75	2,260.80	4.88	-372.63	3.51	0.00	0.00	0.00
2,400.00	13.20	270.75	2,358.15	5.18	-395.46	3.73	0.00	0.00	0.00
2,500.00	13.20	270.75	2,455.51	5.48	-418.29	3.94	0.00	0.00	0.00
2,600.00	13.20	270.75	2,552.87	5.77	-441.13	4.16	0.00	0.00	0.00
2,700.00	13.20	270.75	2,650.23	6.07	-463.96	4.37	0.00	0.00	0.00
2,800.00	13.20	270.75	2,747.58	6.37	-486.79	4.59	0.00	0.00	0.00
2,900.00	13.20	270.75	2,844.94	6.67	-509.63	4.80	0.00	0.00	0.00
3,000.00	13.20	270.75	2,942.30	6.97	-532.46	5.02	0.00	0.00	0.00
3,100.00	13.20	270.75	3,039.66	7.27	-555.29	5.23	0.00	0.00	0.00
3,200.00	13.20	270.75	3,137.02	7.57	-578.12	5.45	0.00	0.00	0.00
3,300.00	13.20	270.75	3,234.37	7.87	-600.96	5.66	0.00	0.00	0.00
3,400.00	13.20	270.75	3,331.73	8.17	-623.79	5.88	0.00	0.00	0.00
3,500.00	13.20	270.75	3,429.09	8.46	-646.62	6.09	0.00	0.00	0.00
3,600.00	13.20	270.75	3,526.45	8.76	-669.46	6.31	0.00	0.00	0.00
3,700.00	13.20	270.75	3,623.81	9.06	-692.29	6.53	0.00	0.00	0.00
3,800.00	13.20	270.75	3,721.16	9.36	-715.12	6.74	0.00	0.00	0.00
3,900.00	13.20	270.75	3,818.52	9.66	-737.96	6.96	0.00	0.00	0.00
3,910.00	13.20	270.75	3,828.26	9.69	-740.24	6.98	0.00	0.00	0.00
Begin Drop @ 3910.00ft									
4,000.00	11.40	270.75	3,916.19	9.94	-759.41	7.16	2.00	-2.00	0.00
4,100.00	9.40	270.75	4,014.54	10.18	-777.46	7.33	2.00	-2.00	0.00
4,200.00	7.40	270.75	4,113.46	10.37	-792.07	7.47	2.00	-2.00	0.00
4,300.00	5.40	270.75	4,212.83	10.51	-803.21	7.57	2.00	-2.00	0.00

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well BUDDY 7-10HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 5089.00usft (Drilling Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 5089.00usft (Drilling Rig)
<b>Site:</b>	1N-67W-07 BUDDY 17-7HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	BUDDY 7-10HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-2		

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)
4,335.30	4.69	270.75	4,248.00	10.56	-806.32	7.60	2.00	-2.00	0.00
<b>Parkman</b>									
4,400.00	3.40	270.75	4,312.53	10.62	-810.88	7.64	2.00	-2.00	0.00
4,500.00	1.40	270.75	4,412.44	10.67	-815.07	7.68	2.00	-2.00	0.00
4,570.00	0.00	0.00	4,482.43	10.68	-815.92	7.69	2.00	-2.00	127.50
<b>End Drop @ 4570.00ft</b>									
4,600.00	0.00	0.00	4,512.43	10.68	-815.92	7.69	0.00	0.00	0.00
4,700.00	0.00	0.00	4,612.43	10.68	-815.92	7.69	0.00	0.00	0.00
4,714.57	0.00	0.00	4,627.00	10.68	-815.92	7.69	0.00	0.00	0.00
<b>Sussex</b>									
4,800.00	0.00	0.00	4,712.43	10.68	-815.92	7.69	0.00	0.00	0.00
4,900.00	0.00	0.00	4,812.43	10.68	-815.92	7.69	0.00	0.00	0.00
5,000.00	0.00	0.00	4,912.43	10.68	-815.92	7.69	0.00	0.00	0.00
5,100.00	0.00	0.00	5,012.43	10.68	-815.92	7.69	0.00	0.00	0.00
5,200.00	0.00	0.00	5,112.43	10.68	-815.92	7.69	0.00	0.00	0.00
5,300.00	0.00	0.00	5,212.43	10.68	-815.92	7.69	0.00	0.00	0.00
5,400.00	0.00	0.00	5,312.43	10.68	-815.92	7.69	0.00	0.00	0.00
5,500.00	0.00	0.00	5,412.43	10.68	-815.92	7.69	0.00	0.00	0.00
5,600.00	0.00	0.00	5,512.43	10.68	-815.92	7.69	0.00	0.00	0.00
5,700.00	0.00	0.00	5,612.43	10.68	-815.92	7.69	0.00	0.00	0.00
5,800.00	0.00	0.00	5,712.43	10.68	-815.92	7.69	0.00	0.00	0.00
5,900.00	0.00	0.00	5,812.43	10.68	-815.92	7.69	0.00	0.00	0.00
6,000.00	0.00	0.00	5,912.43	10.68	-815.92	7.69	0.00	0.00	0.00
6,100.00	0.00	0.00	6,012.43	10.68	-815.92	7.69	0.00	0.00	0.00
6,200.00	0.00	0.00	6,112.43	10.68	-815.92	7.69	0.00	0.00	0.00
6,300.00	0.00	0.00	6,212.43	10.68	-815.92	7.69	0.00	0.00	0.00
6,400.00	0.00	0.00	6,312.43	10.68	-815.92	7.69	0.00	0.00	0.00
6,500.00	0.00	0.00	6,412.43	10.68	-815.92	7.69	0.00	0.00	0.00
6,600.00	0.00	0.00	6,512.43	10.68	-815.92	7.69	0.00	0.00	0.00
6,700.00	0.00	0.00	6,612.43	10.68	-815.92	7.69	0.00	0.00	0.00
6,800.00	0.00	0.00	6,712.43	10.68	-815.92	7.69	0.00	0.00	0.00
6,900.00	0.00	0.00	6,812.43	10.68	-815.92	7.69	0.00	0.00	0.00
7,000.00	0.00	0.00	6,912.43	10.68	-815.92	7.69	0.00	0.00	0.00
7,023.38	0.00	0.00	6,935.81	10.68	-815.92	7.69	0.00	0.00	0.00
<b>KOP @ 7023.38ft :: DLS = 8°/100'</b>									
7,100.00	6.13	359.54	7,012.29	14.78	-815.96	11.78	8.00	8.00	-0.60
7,200.00	14.13	359.54	7,110.65	32.35	-816.10	29.36	8.00	8.00	0.00
7,300.00	22.13	359.54	7,205.61	63.44	-816.35	60.45	8.00	8.00	0.00
7,400.00	30.13	359.54	7,295.31	107.44	-816.71	104.45	8.00	8.00	0.00
7,500.00	38.13	359.54	7,378.02	163.50	-817.16	160.50	8.00	8.00	0.00
7,511.48	39.05	359.54	7,387.00	170.66	-817.22	167.67	8.00	8.00	0.00
<b>Sharon Springs</b>									
7,600.00	46.13	359.54	7,452.13	230.53	-817.70	227.53	8.00	8.00	0.00
7,614.40	47.28	359.54	7,462.00	241.00	-817.79	238.00	8.00	8.00	0.00
<b>Niobrara</b>									
7,700.00	54.13	359.54	7,516.18	307.21	-818.32	304.21	8.00	8.00	0.00
7,738.70	57.23	359.54	7,538.00	339.17	-818.58	336.17	8.00	8.00	0.00
<b>Nio B</b>									
7,800.00	62.13	359.54	7,568.94	392.06	-819.01	389.06	8.00	8.00	0.00
7,900.00	70.13	359.54	7,609.37	483.43	-819.75	480.42	8.00	8.00	0.00
7,947.41	73.92	359.54	7,624.00	528.52	-820.11	525.51	8.00	8.00	0.00
<b>Nio C</b>									
8,000.00	78.13	359.54	7,636.70	579.54	-820.53	576.53	8.00	8.00	0.00

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well BUDDY 7-10HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 5089.00usft (Drilling Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 5089.00usft (Drilling Rig)
<b>Site:</b>	1N-67W-07 BUDDY 17-7HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	BUDDY 7-10HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-2		

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)
8,100.00	86.13	359.54	7,650.38	678.51	-821.33	675.50	8.00	8.00	0.00
8,151.49	90.25	359.54	7,652.00	729.96	-821.74	726.95	8.00	8.00	0.00
End Build @ 8151.49ft - Top of Production									
8,200.00	90.25	359.54	7,651.79	778.47	-822.13	775.45	0.00	0.00	0.00
8,300.00	90.25	359.54	7,651.36	878.47	-822.94	875.45	0.00	0.00	0.00
8,400.00	90.25	359.54	7,650.93	978.46	-823.75	975.44	0.00	0.00	0.00
8,500.00	90.25	359.54	7,650.49	1,078.46	-824.56	1,075.43	0.00	0.00	0.00
8,600.00	90.25	359.54	7,650.06	1,178.46	-825.37	1,175.42	0.00	0.00	0.00
8,700.00	90.25	359.54	7,649.62	1,278.45	-826.18	1,275.42	0.00	0.00	0.00
8,800.00	90.25	359.54	7,649.19	1,378.45	-826.99	1,375.41	0.00	0.00	0.00
8,900.00	90.25	359.54	7,648.76	1,478.44	-827.80	1,475.40	0.00	0.00	0.00
9,000.00	90.25	359.54	7,648.32	1,578.44	-828.60	1,575.39	0.00	0.00	0.00
9,100.00	90.25	359.54	7,647.89	1,678.43	-829.41	1,675.38	0.00	0.00	0.00
9,200.00	90.25	359.54	7,647.45	1,778.43	-830.22	1,775.38	0.00	0.00	0.00
9,300.00	90.25	359.54	7,647.02	1,878.43	-831.03	1,875.37	0.00	0.00	0.00
9,400.00	90.25	359.54	7,646.59	1,978.42	-831.84	1,975.36	0.00	0.00	0.00
9,500.00	90.25	359.54	7,646.15	2,078.42	-832.65	2,075.35	0.00	0.00	0.00
9,600.00	90.25	359.54	7,645.72	2,178.41	-833.46	2,175.34	0.00	0.00	0.00
9,700.00	90.25	359.54	7,645.28	2,278.41	-834.27	2,275.34	0.00	0.00	0.00
9,800.00	90.25	359.54	7,644.85	2,378.41	-835.07	2,375.33	0.00	0.00	0.00
9,900.00	90.25	359.54	7,644.42	2,478.40	-835.88	2,475.32	0.00	0.00	0.00
10,000.00	90.25	359.54	7,643.98	2,578.40	-836.69	2,575.31	0.00	0.00	0.00
10,100.00	90.25	359.54	7,643.55	2,678.39	-837.50	2,675.31	0.00	0.00	0.00
10,200.00	90.25	359.54	7,643.11	2,778.39	-838.31	2,775.30	0.00	0.00	0.00
10,300.00	90.25	359.54	7,642.68	2,878.38	-839.12	2,875.29	0.00	0.00	0.00
10,400.00	90.25	359.54	7,642.25	2,978.38	-839.93	2,975.28	0.00	0.00	0.00
10,500.00	90.25	359.54	7,641.81	3,078.38	-840.74	3,075.27	0.00	0.00	0.00
10,600.00	90.25	359.54	7,641.38	3,178.37	-841.54	3,175.27	0.00	0.00	0.00
10,700.00	90.25	359.54	7,640.94	3,278.37	-842.35	3,275.26	0.00	0.00	0.00
10,800.00	90.25	359.54	7,640.51	3,378.36	-843.16	3,375.25	0.00	0.00	0.00
10,900.00	90.25	359.54	7,640.08	3,478.36	-843.97	3,475.24	0.00	0.00	0.00
11,000.00	90.25	359.54	7,639.64	3,578.35	-844.78	3,575.23	0.00	0.00	0.00
11,100.00	90.25	359.54	7,639.21	3,678.35	-845.59	3,675.23	0.00	0.00	0.00
11,200.00	90.25	359.54	7,638.77	3,778.35	-846.40	3,775.22	0.00	0.00	0.00
11,300.00	90.25	359.54	7,638.34	3,878.34	-847.21	3,875.21	0.00	0.00	0.00
11,400.00	90.25	359.54	7,637.91	3,978.34	-848.01	3,975.20	0.00	0.00	0.00
11,500.00	90.25	359.54	7,637.47	4,078.33	-848.82	4,075.20	0.00	0.00	0.00
11,600.00	90.25	359.54	7,637.04	4,178.33	-849.63	4,175.19	0.00	0.00	0.00
11,700.00	90.25	359.54	7,636.60	4,278.33	-850.44	4,275.18	0.00	0.00	0.00
11,800.00	90.25	359.54	7,636.17	4,378.32	-851.25	4,375.17	0.00	0.00	0.00
11,900.00	90.25	359.54	7,635.74	4,478.32	-852.06	4,475.16	0.00	0.00	0.00
12,000.00	90.25	359.54	7,635.30	4,578.31	-852.87	4,575.16	0.00	0.00	0.00
12,100.00	90.25	359.54	7,634.87	4,678.31	-853.68	4,675.15	0.00	0.00	0.00
12,200.00	90.25	359.54	7,634.43	4,778.30	-854.48	4,775.14	0.00	0.00	0.00
12,300.00	90.25	359.54	7,634.00	4,878.30	-855.29	4,875.13	0.00	0.00	0.00
12,400.00	90.25	359.54	7,633.57	4,978.30	-856.10	4,975.12	0.00	0.00	0.00
12,500.00	90.25	359.54	7,633.13	5,078.29	-856.91	5,075.12	0.00	0.00	0.00
12,600.00	90.25	359.54	7,632.70	5,178.29	-857.72	5,175.11	0.00	0.00	0.00
12,700.00	90.25	359.54	7,632.26	5,278.28	-858.53	5,275.10	0.00	0.00	0.00
12,800.00	90.25	359.54	7,631.83	5,378.28	-859.34	5,375.09	0.00	0.00	0.00
12,900.00	90.25	359.54	7,631.40	5,478.27	-860.15	5,475.09	0.00	0.00	0.00
13,000.00	90.25	359.54	7,630.96	5,578.27	-860.95	5,575.08	0.00	0.00	0.00
13,100.00	90.25	359.54	7,630.53	5,678.27	-861.76	5,675.07	0.00	0.00	0.00

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well BUDDY 7-10HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 5089.00usft (Drilling Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 5089.00usft (Drilling Rig)
<b>Site:</b>	1N-67W-07 BUDDY 17-7HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	BUDDY 7-10HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-2		

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)
13,200.00	90.25	359.54	7,630.09	5,778.26	-862.57	5,775.06	0.00	0.00	0.00
13,300.00	90.25	359.54	7,629.66	5,878.26	-863.38	5,875.05	0.00	0.00	0.00
13,400.00	90.25	359.54	7,629.23	5,978.25	-864.19	5,975.05	0.00	0.00	0.00
13,500.00	90.25	359.54	7,628.79	6,078.25	-865.00	6,075.04	0.00	0.00	0.00
13,500.20	90.25	359.54	7,628.79	6,078.45	-865.00	6,075.24	0.00	0.00	0.00
Begin Turn to BHL @ 13500.20ft									
13,600.00	90.25	1.03	7,628.36	6,178.24	-864.50	6,175.03	1.50	0.00	1.50
13,603.66	90.25	1.09	7,628.34	6,181.91	-864.44	6,178.70	1.50	0.00	1.50
End Turn @ 13603.66ft									
13,700.00	90.25	1.09	7,627.92	6,278.23	-862.61	6,275.02	0.00	0.00	0.00
13,800.00	90.25	1.09	7,627.49	6,378.21	-860.71	6,375.01	0.00	0.00	0.00
13,900.00	90.25	1.09	7,627.05	6,478.19	-858.81	6,475.00	0.00	0.00	0.00
14,000.00	90.25	1.09	7,626.62	6,578.17	-856.91	6,574.98	0.00	0.00	0.00
14,100.00	90.25	1.09	7,626.19	6,678.15	-855.01	6,674.97	0.00	0.00	0.00
14,200.00	90.25	1.09	7,625.75	6,778.13	-853.11	6,774.96	0.00	0.00	0.00
14,300.00	90.25	1.09	7,625.32	6,878.11	-851.21	6,874.95	0.00	0.00	0.00
14,400.00	90.25	1.09	7,624.88	6,978.09	-849.31	6,974.93	0.00	0.00	0.00
14,500.00	90.25	1.09	7,624.45	7,078.07	-847.41	7,074.92	0.00	0.00	0.00
14,600.00	90.25	1.09	7,624.02	7,178.05	-845.51	7,174.91	0.00	0.00	0.00
14,700.00	90.25	1.09	7,623.58	7,278.04	-843.61	7,274.89	0.00	0.00	0.00
14,800.00	90.25	1.09	7,623.15	7,378.02	-841.71	7,374.88	0.00	0.00	0.00
14,900.00	90.25	1.09	7,622.71	7,478.00	-839.81	7,474.87	0.00	0.00	0.00
15,000.00	90.25	1.09	7,622.28	7,577.98	-837.91	7,574.86	0.00	0.00	0.00
15,100.00	90.25	1.09	7,621.84	7,677.96	-836.01	7,674.84	0.00	0.00	0.00
15,200.00	90.25	1.09	7,621.41	7,777.94	-834.11	7,774.83	0.00	0.00	0.00
15,300.00	90.25	1.09	7,620.98	7,877.92	-832.21	7,874.82	0.00	0.00	0.00
15,400.00	90.25	1.09	7,620.54	7,977.90	-830.31	7,974.81	0.00	0.00	0.00
15,500.00	90.25	1.09	7,620.11	8,077.88	-828.41	8,074.79	0.00	0.00	0.00
15,600.00	90.25	1.09	7,619.67	8,177.86	-826.51	8,174.78	0.00	0.00	0.00
15,700.00	90.25	1.09	7,619.24	8,277.85	-824.61	8,274.77	0.00	0.00	0.00
15,800.00	90.25	1.09	7,618.81	8,377.83	-822.71	8,374.76	0.00	0.00	0.00
15,900.00	90.25	1.09	7,618.37	8,477.81	-820.81	8,474.74	0.00	0.00	0.00
16,000.00	90.25	1.09	7,617.94	8,577.79	-818.91	8,574.73	0.00	0.00	0.00
16,100.00	90.25	1.09	7,617.50	8,677.77	-817.01	8,674.72	0.00	0.00	0.00
16,200.00	90.25	1.09	7,617.07	8,777.75	-815.11	8,774.70	0.00	0.00	0.00
16,300.00	90.25	1.09	7,616.63	8,877.73	-813.21	8,874.69	0.00	0.00	0.00
16,400.00	90.25	1.09	7,616.20	8,977.71	-811.31	8,974.68	0.00	0.00	0.00
16,500.00	90.25	1.09	7,615.77	9,077.69	-809.41	9,074.67	0.00	0.00	0.00
16,600.00	90.25	1.09	7,615.33	9,177.68	-807.51	9,174.65	0.00	0.00	0.00
16,700.00	90.25	1.09	7,614.90	9,277.66	-805.61	9,274.64	0.00	0.00	0.00
16,800.00	90.25	1.09	7,614.46	9,377.64	-803.71	9,374.63	0.00	0.00	0.00
16,900.00	90.25	1.09	7,614.03	9,477.62	-801.81	9,474.62	0.00	0.00	0.00
17,000.00	90.25	1.09	7,613.60	9,577.60	-799.91	9,574.60	0.00	0.00	0.00
17,100.00	90.25	1.09	7,613.16	9,677.58	-798.01	9,674.59	0.00	0.00	0.00
17,200.00	90.25	1.09	7,612.73	9,777.56	-796.11	9,774.58	0.00	0.00	0.00
17,300.00	90.25	1.09	7,612.29	9,877.54	-794.22	9,874.56	0.00	0.00	0.00
17,400.00	90.25	1.09	7,611.86	9,977.52	-792.32	9,974.55	0.00	0.00	0.00
17,500.00	90.25	1.09	7,611.42	10,077.50	-790.42	10,074.54	0.00	0.00	0.00
17,600.00	90.25	1.09	7,610.99	10,177.49	-788.52	10,174.53	0.00	0.00	0.00
17,700.00	90.25	1.09	7,610.56	10,277.47	-786.62	10,274.51	0.00	0.00	0.00
17,800.00	90.25	1.09	7,610.12	10,377.45	-784.72	10,374.50	0.00	0.00	0.00
17,900.00	90.25	1.09	7,609.69	10,477.43	-782.82	10,474.49	0.00	0.00	0.00
18,000.00	90.25	1.09	7,609.25	10,577.41	-780.92	10,574.48	0.00	0.00	0.00
18,100.00	90.25	1.09	7,608.82	10,677.39	-779.02	10,674.46	0.00	0.00	0.00



# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well BUDDY 7-10HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 5089.00usft (Drilling Rig)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 5089.00usft (Drilling Rig)
<b>Site:</b>	1N-67W-07 BUDDY 17-7HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	BUDDY 7-10HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-2		

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)
18,200.00	90.25	1.09	7,608.39	10,777.37	-777.12	10,774.45	0.00	0.00	0.00
18,288.84	90.25	1.09	7,608.00	10,866.19	-775.43	10,863.27	0.00	0.00	0.00
TD Well @ 18288.84ft									

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,518.56	1,500.00	9 5/8" Csg	9-5/8	13-1/2
8,151.49	7,652.00	Top of Production	5-1/2	7-7/8

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,263.83	1,252.00	Fox Hills			
4,335.30	4,248.00	Parkman			
4,714.57	4,627.00	Sussex			
7,511.48	7,387.00	Sharon Springs			
7,614.40	7,462.00	Niobrara			
7,738.70	7,538.00	Nio B			
7,947.41	7,624.00	Nio C			

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
230.00	230.00	0.00	0.00	Begin Nudge @ 230.00ft
1,110.00	1,102.24	1.32	-100.91	End Nudge @ 1110.00ft
3,910.00	3,828.26	9.69	-740.24	Begin Drop @ 3910.00ft
4,570.00	4,482.43	10.68	-815.92	End Drop @ 4570.00ft
7,023.38	6,935.81	10.68	-815.92	KOP @ 7023.38ft :: DLS = 8°/100'
8,151.49	7,652.00	729.96	-821.74	End Build @ 8151.49ft
13,500.20	7,628.79	6,078.45	-865.00	Begin Turn to BHL @ 13500.20ft
13,603.66	7,628.34	6,181.91	-864.44	End Turn @ 13603.66ft
18,288.84	7,608.00	10,866.19	-775.43	TD Well @ 18288.84ft