

US ROCKIES WATTENBERG PLANNING

**WELD-NAD83-UTMFT13N
1N-67W-07 BUDDY 17-7HZ PAD
BUDDY 7-15HZ**

Plan A

Plan: Permit Rev-1

SHL Lat/Long: 40.070707/-104.927447
Survey Program: MWD+IFR+MSA

Standard Planning Report

15 May, 2018

Project: WELD-NAD83-UTMFT13N
Site: 1N-67W-07 BUDDY 17-7HZ PAD
Well: BUDDY 7-15HZ
Wellbore: Plan A
Design: Permit Rev-1

US ROCKIES WATTENBERG PLANNING

CASING DETAILS

TVD	MD	Size
1500.00	1512.80	9-5/8
7553.00	8014.52	5-1/2

WELL DETAILS: BUDDY 7-15HZ
GL = 5072.00
RKB = 17' @ 5089.00usft (Drilling Rig)

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	930.00	10.20	91.00	926.41	-1.05	60.36	1.50	91.00	-1.23	
4	3730.00	10.20	91.00	3682.16	-9.71	556.12	0.00	0.00	-11.36	
5	4240.00	0.00	0.00	4189.47	-10.50	601.39	2.00	180.00	-12.28	
6	6887.33	0.00	0.00	6836.80	-10.50	601.39	0.00	0.00	-12.28	
7	8014.52	90.17	359.83	7553.00	707.88	599.22	8.00	359.83	706.10	
8	18165.05	90.17	359.83	7522.00	10858.32	568.62	0.00	0.00	10856.58	BUDDY 7-15HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
BUDDY 7-15HZ_SHL	0.00	0.00	0.00	40.070707	-104.927447
BUDDY 7-15HZ_BHL	7522.00	10858.32	568.62	40.100526	-104.925414

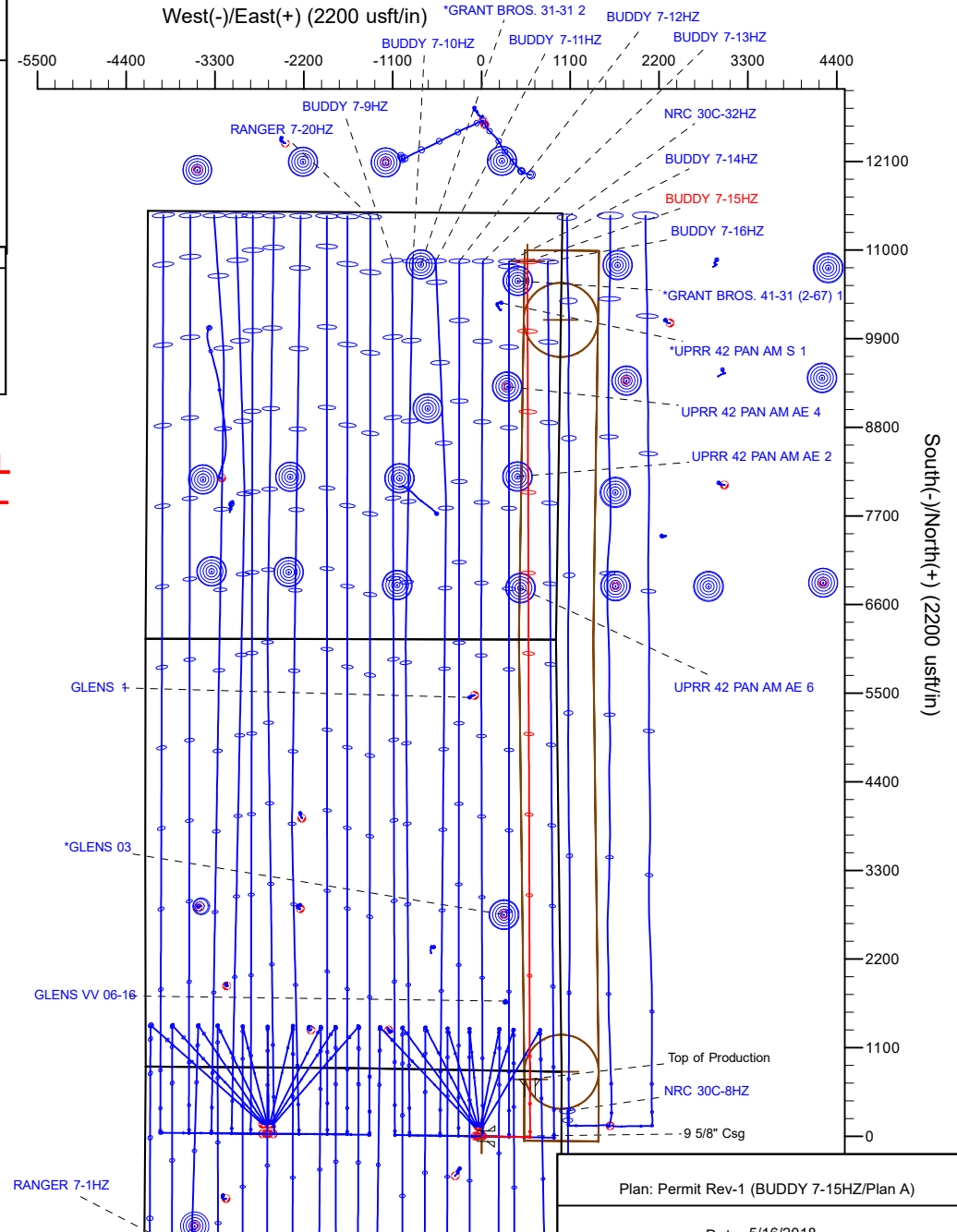
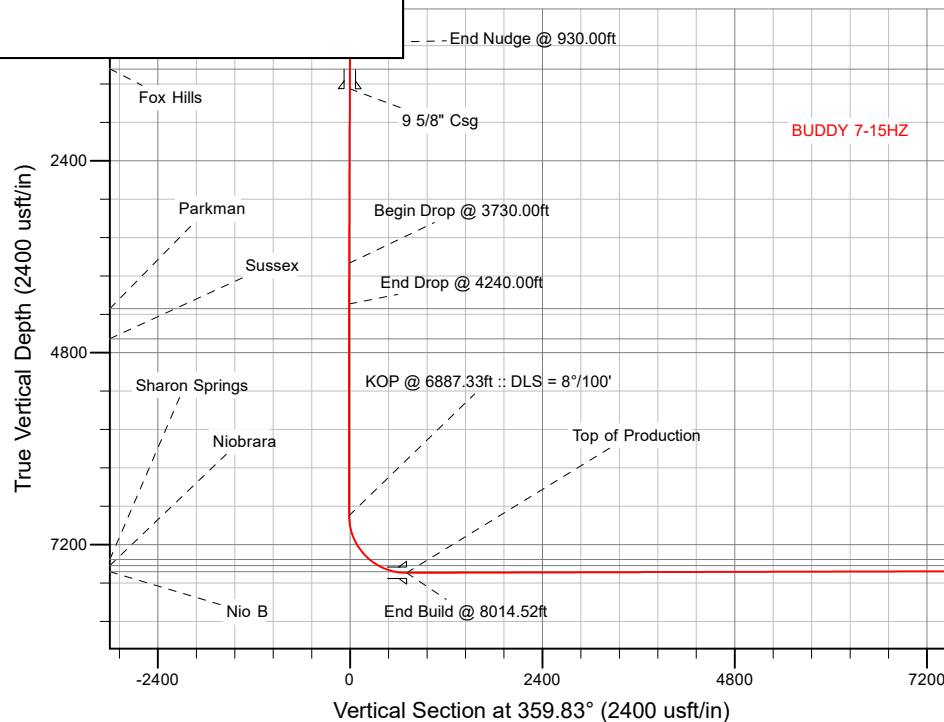
FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1252.00	1260.81	Fox Hills
4248.00	4298.53	Parkman
4627.00	4677.53	Sussex
7387.00	7514.76	Sharon Springs
7462.00	7647.36	Niobrara
7538.00	7865.50	Nio B

SHL
818' FNL
990' FEL

HEEL
100' FNL
388' FEL

TOE
600' FNL
425' FEL



Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BUDDY 7-15HZ
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 7-15HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

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

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

Well	BUDDY 7-15HZ			
Well Position	+N/-S	-120.53 usft	Northing:	14,552,489.18 usft
	+E/-W	89.24 usft	Easting:	1,660,714.23 usft
Position Uncertainty		3.28 usft	Wellhead Elevation:	Ground Level: 5,072.00 usft

Wellbore	Plan A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	5/2/2018	8.18	66.54	52,102.04336435

Design	Permit Rev-1			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	359.83

Plan Survey Tool Program	Date	5/15/2018		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
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	18,165.05	Permit Rev-1 (Plan A)	APC_ISCWSA REV 2 MWD+II Fixed:v2:Rockies, crustal dec +

Corporate
Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BUDDY 7-15HZ
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)
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Well:	BUDDY 7-15HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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	
930.00	10.20	91.00	926.41	-1.05	60.36	1.50	1.50	0.00	91.00	
3,730.00	10.20	91.00	3,682.16	-9.71	556.12	0.00	0.00	0.00	0.00	
4,240.00	0.00	0.00	4,189.47	-10.50	601.39	2.00	-2.00	0.00	180.00	
6,887.33	0.00	0.00	6,836.80	-10.50	601.39	0.00	0.00	0.00	0.00	
8,014.52	90.17	359.83	7,553.00	707.88	599.22	8.00	8.00	-0.02	359.83	
18,165.05	90.17	359.83	7,522.00	10,858.32	568.62	0.00	0.00	0.00	0.00	BUDDY 7-15HZ_BHL

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BUDDY 7-15HZ
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 7-15HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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
Begin Nudge @ 250.00ft									
300.00	0.75	91.00	300.00	-0.01	0.33	-0.01	1.50	1.50	0.00
400.00	2.25	91.00	399.96	-0.05	2.94	-0.06	1.50	1.50	0.00
500.00	3.75	91.00	499.82	-0.14	8.18	-0.17	1.50	1.50	0.00
600.00	5.25	91.00	599.51	-0.28	16.02	-0.33	1.50	1.50	0.00
700.00	6.75	91.00	698.96	-0.46	26.47	-0.54	1.50	1.50	0.00
800.00	8.25	91.00	798.10	-0.69	39.52	-0.81	1.50	1.50	0.00
900.00	9.75	91.00	896.87	-0.96	55.16	-1.13	1.50	1.50	0.00
930.00	10.20	91.00	926.41	-1.05	60.36	-1.23	1.50	1.50	0.00
End Nudge @ 930.00ft									
1,000.00	10.20	91.00	995.31	-1.27	72.75	-1.49	0.00	0.00	0.00
1,100.00	10.20	91.00	1,093.73	-1.58	90.46	-1.85	0.00	0.00	0.00
1,200.00	10.20	91.00	1,192.15	-1.89	108.16	-2.21	0.00	0.00	0.00
1,260.81	10.20	91.00	1,252.00	-2.08	118.93	-2.43	0.00	0.00	0.00
Fox Hills									
1,300.00	10.20	91.00	1,290.57	-2.20	125.87	-2.57	0.00	0.00	0.00
1,400.00	10.20	91.00	1,388.99	-2.51	143.58	-2.93	0.00	0.00	0.00
1,500.00	10.20	91.00	1,487.41	-2.82	161.28	-3.29	0.00	0.00	0.00
1,512.80	10.20	91.00	1,500.00	-2.85	163.55	-3.34	0.00	0.00	0.00
9 5/8" Csg									
1,600.00	10.20	91.00	1,585.82	-3.12	178.99	-3.66	0.00	0.00	0.00
1,700.00	10.20	91.00	1,684.24	-3.43	196.69	-4.02	0.00	0.00	0.00
1,800.00	10.20	91.00	1,782.66	-3.74	214.40	-4.38	0.00	0.00	0.00
1,900.00	10.20	91.00	1,881.08	-4.05	232.11	-4.74	0.00	0.00	0.00
2,000.00	10.20	91.00	1,979.50	-4.36	249.81	-5.10	0.00	0.00	0.00
2,100.00	10.20	91.00	2,077.92	-4.67	267.52	-5.46	0.00	0.00	0.00
2,200.00	10.20	91.00	2,176.34	-4.98	285.22	-5.82	0.00	0.00	0.00
2,300.00	10.20	91.00	2,274.76	-5.29	302.93	-6.19	0.00	0.00	0.00
2,400.00	10.20	91.00	2,373.18	-5.60	320.63	-6.55	0.00	0.00	0.00
2,500.00	10.20	91.00	2,471.60	-5.91	338.34	-6.91	0.00	0.00	0.00
2,600.00	10.20	91.00	2,570.02	-6.21	356.05	-7.27	0.00	0.00	0.00
2,700.00	10.20	91.00	2,668.44	-6.52	373.75	-7.63	0.00	0.00	0.00
2,800.00	10.20	91.00	2,766.86	-6.83	391.46	-7.99	0.00	0.00	0.00
2,900.00	10.20	91.00	2,865.28	-7.14	409.16	-8.36	0.00	0.00	0.00
3,000.00	10.20	91.00	2,963.70	-7.45	426.87	-8.72	0.00	0.00	0.00
3,100.00	10.20	91.00	3,062.12	-7.76	444.57	-9.08	0.00	0.00	0.00
3,200.00	10.20	91.00	3,160.54	-8.07	462.28	-9.44	0.00	0.00	0.00
3,300.00	10.20	91.00	3,258.96	-8.38	479.99	-9.80	0.00	0.00	0.00
3,400.00	10.20	91.00	3,357.38	-8.69	497.69	-10.16	0.00	0.00	0.00
3,500.00	10.20	91.00	3,455.80	-9.00	515.40	-10.53	0.00	0.00	0.00
3,600.00	10.20	91.00	3,554.22	-9.31	533.10	-10.89	0.00	0.00	0.00
3,700.00	10.20	91.00	3,652.64	-9.61	550.81	-11.25	0.00	0.00	0.00
3,730.00	10.20	91.00	3,682.16	-9.71	556.12	-11.36	0.00	0.00	0.00
Begin Drop @ 3730.00ft									
3,800.00	8.80	91.00	3,751.20	-9.91	567.67	-11.59	2.00	-2.00	0.00
3,900.00	6.80	91.00	3,850.27	-10.15	581.24	-11.87	2.00	-2.00	0.00
4,000.00	4.80	91.00	3,949.75	-10.32	591.34	-12.08	2.00	-2.00	0.00
4,100.00	2.80	91.00	4,049.53	-10.44	597.97	-12.21	2.00	-2.00	0.00
4,200.00	0.80	91.00	4,149.47	-10.49	601.11	-12.28	2.00	-2.00	0.00
4,240.00	0.00	0.00	4,189.47	-10.50	601.39	-12.28	2.00	-2.00	0.00

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BUDDY 7-15HZ
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 7-15HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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)
End Drop @ 4240.00ft									
4,298.53	0.00	0.00	4,248.00	-10.50	601.39	-12.28	0.00	0.00	0.00
Parkman									
4,300.00	0.00	0.00	4,249.47	-10.50	601.39	-12.28	0.00	0.00	0.00
4,400.00	0.00	0.00	4,349.47	-10.50	601.39	-12.28	0.00	0.00	0.00
4,500.00	0.00	0.00	4,449.47	-10.50	601.39	-12.28	0.00	0.00	0.00
4,600.00	0.00	0.00	4,549.47	-10.50	601.39	-12.28	0.00	0.00	0.00
4,677.53	0.00	0.00	4,627.00	-10.50	601.39	-12.28	0.00	0.00	0.00
Sussex									
4,700.00	0.00	0.00	4,649.47	-10.50	601.39	-12.28	0.00	0.00	0.00
4,800.00	0.00	0.00	4,749.47	-10.50	601.39	-12.28	0.00	0.00	0.00
4,900.00	0.00	0.00	4,849.47	-10.50	601.39	-12.28	0.00	0.00	0.00
5,000.00	0.00	0.00	4,949.47	-10.50	601.39	-12.28	0.00	0.00	0.00
5,100.00	0.00	0.00	5,049.47	-10.50	601.39	-12.28	0.00	0.00	0.00
5,200.00	0.00	0.00	5,149.47	-10.50	601.39	-12.28	0.00	0.00	0.00
5,300.00	0.00	0.00	5,249.47	-10.50	601.39	-12.28	0.00	0.00	0.00
5,400.00	0.00	0.00	5,349.47	-10.50	601.39	-12.28	0.00	0.00	0.00
5,500.00	0.00	0.00	5,449.47	-10.50	601.39	-12.28	0.00	0.00	0.00
5,600.00	0.00	0.00	5,549.47	-10.50	601.39	-12.28	0.00	0.00	0.00
5,700.00	0.00	0.00	5,649.47	-10.50	601.39	-12.28	0.00	0.00	0.00
5,800.00	0.00	0.00	5,749.47	-10.50	601.39	-12.28	0.00	0.00	0.00
5,900.00	0.00	0.00	5,849.47	-10.50	601.39	-12.28	0.00	0.00	0.00
6,000.00	0.00	0.00	5,949.47	-10.50	601.39	-12.28	0.00	0.00	0.00
6,100.00	0.00	0.00	6,049.47	-10.50	601.39	-12.28	0.00	0.00	0.00
6,200.00	0.00	0.00	6,149.47	-10.50	601.39	-12.28	0.00	0.00	0.00
6,300.00	0.00	0.00	6,249.47	-10.50	601.39	-12.28	0.00	0.00	0.00
6,400.00	0.00	0.00	6,349.47	-10.50	601.39	-12.28	0.00	0.00	0.00
6,500.00	0.00	0.00	6,449.47	-10.50	601.39	-12.28	0.00	0.00	0.00
6,600.00	0.00	0.00	6,549.47	-10.50	601.39	-12.28	0.00	0.00	0.00
6,700.00	0.00	0.00	6,649.47	-10.50	601.39	-12.28	0.00	0.00	0.00
6,800.00	0.00	0.00	6,749.47	-10.50	601.39	-12.28	0.00	0.00	0.00
6,887.33	0.00	0.00	6,836.80	-10.50	601.39	-12.28	0.00	0.00	0.00
KOP @ 6887.33ft :: DLS = 8°/100'									
6,900.00	1.01	359.83	6,849.47	-10.39	601.39	-12.17	8.00	8.00	0.00
7,000.00	9.01	359.83	6,949.01	-1.65	601.36	-3.44	8.00	8.00	0.00
7,100.00	17.01	359.83	7,046.36	20.85	601.30	19.06	8.00	8.00	0.00
7,200.00	25.01	359.83	7,139.63	56.68	601.19	54.89	8.00	8.00	0.00
7,300.00	33.01	359.83	7,227.01	105.14	601.04	103.35	8.00	8.00	0.00
7,400.00	41.01	359.83	7,306.80	165.29	600.86	163.51	8.00	8.00	0.00
7,500.00	49.01	359.83	7,377.43	235.96	600.65	234.18	8.00	8.00	0.00
7,514.76	50.19	359.83	7,387.00	247.20	600.61	245.42	8.00	8.00	0.00
Sharon Springs									
7,600.00	57.01	359.83	7,437.55	315.77	600.41	313.99	8.00	8.00	0.00
7,647.36	60.80	359.83	7,462.00	356.32	600.28	354.54	8.00	8.00	0.00
Niobrara									
7,700.00	65.01	359.83	7,485.97	403.17	600.14	401.39	8.00	8.00	0.00
7,800.00	73.01	359.83	7,521.75	496.46	599.86	494.68	8.00	8.00	0.00
7,865.50	78.25	359.83	7,538.00	559.89	599.67	558.11	8.00	8.00	0.00
Nio B									
7,900.00	81.01	359.83	7,544.21	593.83	599.57	592.05	8.00	8.00	0.00
8,000.00	89.01	359.83	7,552.89	693.37	599.27	691.59	8.00	8.00	0.00
8,014.52	90.17	359.83	7,553.00	707.89	599.22	706.11	8.00	8.00	0.00
End Build @ 8014.52ft - Top of Production									

Corporate Planning Report

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Wellbore:	Plan A		
Design:	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)
8,100.00	90.17	359.83	7,552.74	793.37	598.97	791.59	0.00	0.00	0.00
8,200.00	90.17	359.83	7,552.43	893.36	598.67	891.58	0.00	0.00	0.00
8,300.00	90.17	359.83	7,552.12	993.36	598.36	991.58	0.00	0.00	0.00
8,400.00	90.17	359.83	7,551.82	1,093.36	598.06	1,091.58	0.00	0.00	0.00
8,500.00	90.17	359.83	7,551.51	1,193.36	597.76	1,191.58	0.00	0.00	0.00
8,600.00	90.17	359.83	7,551.21	1,293.36	597.46	1,291.58	0.00	0.00	0.00
8,700.00	90.17	359.83	7,550.90	1,393.36	597.16	1,391.58	0.00	0.00	0.00
8,800.00	90.17	359.83	7,550.60	1,493.36	596.86	1,491.58	0.00	0.00	0.00
8,900.00	90.17	359.83	7,550.29	1,593.36	596.55	1,591.58	0.00	0.00	0.00
9,000.00	90.17	359.83	7,549.99	1,693.36	596.25	1,691.58	0.00	0.00	0.00
9,100.00	90.17	359.83	7,549.68	1,793.36	595.95	1,791.58	0.00	0.00	0.00
9,200.00	90.17	359.83	7,549.38	1,893.36	595.65	1,891.58	0.00	0.00	0.00
9,300.00	90.17	359.83	7,549.07	1,993.35	595.35	1,991.58	0.00	0.00	0.00
9,400.00	90.17	359.83	7,548.77	2,093.35	595.05	2,091.58	0.00	0.00	0.00
9,500.00	90.17	359.83	7,548.46	2,193.35	594.75	2,191.58	0.00	0.00	0.00
9,600.00	90.17	359.83	7,548.15	2,293.35	594.44	2,291.58	0.00	0.00	0.00
9,700.00	90.17	359.83	7,547.85	2,393.35	594.14	2,391.58	0.00	0.00	0.00
9,800.00	90.17	359.83	7,547.54	2,493.35	593.84	2,491.58	0.00	0.00	0.00
9,900.00	90.17	359.83	7,547.24	2,593.35	593.54	2,591.58	0.00	0.00	0.00
10,000.00	90.17	359.83	7,546.93	2,693.35	593.24	2,691.58	0.00	0.00	0.00
10,100.00	90.17	359.83	7,546.63	2,793.35	592.94	2,791.58	0.00	0.00	0.00
10,200.00	90.17	359.83	7,546.32	2,893.35	592.63	2,891.58	0.00	0.00	0.00
10,300.00	90.17	359.83	7,546.02	2,993.35	592.33	2,991.58	0.00	0.00	0.00
10,400.00	90.17	359.83	7,545.71	3,093.34	592.03	3,091.57	0.00	0.00	0.00
10,500.00	90.17	359.83	7,545.41	3,193.34	591.73	3,191.57	0.00	0.00	0.00
10,600.00	90.17	359.83	7,545.10	3,293.34	591.43	3,291.57	0.00	0.00	0.00
10,700.00	90.17	359.83	7,544.80	3,393.34	591.13	3,391.57	0.00	0.00	0.00
10,800.00	90.17	359.83	7,544.49	3,493.34	590.83	3,491.57	0.00	0.00	0.00
10,900.00	90.17	359.83	7,544.18	3,593.34	590.52	3,591.57	0.00	0.00	0.00
11,000.00	90.17	359.83	7,543.88	3,693.34	590.22	3,691.57	0.00	0.00	0.00
11,100.00	90.17	359.83	7,543.57	3,793.34	589.92	3,791.57	0.00	0.00	0.00
11,200.00	90.17	359.83	7,543.27	3,893.34	589.62	3,891.57	0.00	0.00	0.00
11,300.00	90.17	359.83	7,542.96	3,993.34	589.32	3,991.57	0.00	0.00	0.00
11,400.00	90.17	359.83	7,542.66	4,093.34	589.02	4,091.57	0.00	0.00	0.00
11,500.00	90.17	359.83	7,542.35	4,193.33	588.72	4,191.57	0.00	0.00	0.00
11,600.00	90.17	359.83	7,542.05	4,293.33	588.41	4,291.57	0.00	0.00	0.00
11,700.00	90.17	359.83	7,541.74	4,393.33	588.11	4,391.57	0.00	0.00	0.00
11,800.00	90.17	359.83	7,541.44	4,493.33	587.81	4,491.57	0.00	0.00	0.00
11,900.00	90.17	359.83	7,541.13	4,593.33	587.51	4,591.57	0.00	0.00	0.00
12,000.00	90.17	359.83	7,540.83	4,693.33	587.21	4,691.57	0.00	0.00	0.00
12,100.00	90.17	359.83	7,540.52	4,793.33	586.91	4,791.57	0.00	0.00	0.00
12,200.00	90.17	359.83	7,540.22	4,893.33	586.60	4,891.57	0.00	0.00	0.00
12,300.00	90.17	359.83	7,539.91	4,993.33	586.30	4,991.57	0.00	0.00	0.00
12,400.00	90.17	359.83	7,539.60	5,093.33	586.00	5,091.57	0.00	0.00	0.00
12,500.00	90.17	359.83	7,539.30	5,193.33	585.70	5,191.56	0.00	0.00	0.00
12,600.00	90.17	359.83	7,538.99	5,293.32	585.40	5,291.56	0.00	0.00	0.00
12,700.00	90.17	359.83	7,538.69	5,393.32	585.10	5,391.56	0.00	0.00	0.00
12,800.00	90.17	359.83	7,538.38	5,493.32	584.80	5,491.56	0.00	0.00	0.00
12,900.00	90.17	359.83	7,538.08	5,593.32	584.49	5,591.56	0.00	0.00	0.00
13,000.00	90.17	359.83	7,537.77	5,693.32	584.19	5,691.56	0.00	0.00	0.00
13,100.00	90.17	359.83	7,537.47	5,793.32	583.89	5,791.56	0.00	0.00	0.00
13,200.00	90.17	359.83	7,537.16	5,893.32	583.59	5,891.56	0.00	0.00	0.00
13,300.00	90.17	359.83	7,536.86	5,993.32	583.29	5,991.56	0.00	0.00	0.00
13,400.00	90.17	359.83	7,536.55	6,093.32	582.99	6,091.56	0.00	0.00	0.00

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BUDDY 7-15HZ
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 7-15HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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)	
13,500.00	90.17	359.83	7,536.25	6,193.32	582.69	6,191.56	0.00	0.00	0.00	
13,600.00	90.17	359.83	7,535.94	6,293.32	582.38	6,291.56	0.00	0.00	0.00	
13,700.00	90.17	359.83	7,535.63	6,393.31	582.08	6,391.56	0.00	0.00	0.00	
13,800.00	90.17	359.83	7,535.33	6,493.31	581.78	6,491.56	0.00	0.00	0.00	
13,900.00	90.17	359.83	7,535.02	6,593.31	581.48	6,591.56	0.00	0.00	0.00	
14,000.00	90.17	359.83	7,534.72	6,693.31	581.18	6,691.56	0.00	0.00	0.00	
14,100.00	90.17	359.83	7,534.41	6,793.31	580.88	6,791.56	0.00	0.00	0.00	
14,200.00	90.17	359.83	7,534.11	6,893.31	580.57	6,891.56	0.00	0.00	0.00	
14,300.00	90.17	359.83	7,533.80	6,993.31	580.27	6,991.56	0.00	0.00	0.00	
14,400.00	90.17	359.83	7,533.50	7,093.31	579.97	7,091.56	0.00	0.00	0.00	
14,500.00	90.17	359.83	7,533.19	7,193.31	579.67	7,191.56	0.00	0.00	0.00	
14,600.00	90.17	359.83	7,532.89	7,293.31	579.37	7,291.56	0.00	0.00	0.00	
14,700.00	90.17	359.83	7,532.58	7,393.31	579.07	7,391.55	0.00	0.00	0.00	
14,800.00	90.17	359.83	7,532.28	7,493.30	578.77	7,491.55	0.00	0.00	0.00	
14,900.00	90.17	359.83	7,531.97	7,593.30	578.46	7,591.55	0.00	0.00	0.00	
15,000.00	90.17	359.83	7,531.67	7,693.30	578.16	7,691.55	0.00	0.00	0.00	
15,100.00	90.17	359.83	7,531.36	7,793.30	577.86	7,791.55	0.00	0.00	0.00	
15,200.00	90.17	359.83	7,531.05	7,893.30	577.56	7,891.55	0.00	0.00	0.00	
15,300.00	90.17	359.83	7,530.75	7,993.30	577.26	7,991.55	0.00	0.00	0.00	
15,400.00	90.17	359.83	7,530.44	8,093.30	576.96	8,091.55	0.00	0.00	0.00	
15,500.00	90.17	359.83	7,530.14	8,193.30	576.66	8,191.55	0.00	0.00	0.00	
15,600.00	90.17	359.83	7,529.83	8,293.30	576.35	8,291.55	0.00	0.00	0.00	
15,700.00	90.17	359.83	7,529.53	8,393.30	576.05	8,391.55	0.00	0.00	0.00	
15,800.00	90.17	359.83	7,529.22	8,493.30	575.75	8,491.55	0.00	0.00	0.00	
15,900.00	90.17	359.83	7,528.92	8,593.29	575.45	8,591.55	0.00	0.00	0.00	
16,000.00	90.17	359.83	7,528.61	8,693.29	575.15	8,691.55	0.00	0.00	0.00	
16,100.00	90.17	359.83	7,528.31	8,793.29	574.85	8,791.55	0.00	0.00	0.00	
16,200.00	90.17	359.83	7,528.00	8,893.29	574.54	8,891.55	0.00	0.00	0.00	
16,300.00	90.17	359.83	7,527.70	8,993.29	574.24	8,991.55	0.00	0.00	0.00	
16,400.00	90.17	359.83	7,527.39	9,093.29	573.94	9,091.55	0.00	0.00	0.00	
16,500.00	90.17	359.83	7,527.08	9,193.29	573.64	9,191.55	0.00	0.00	0.00	
16,600.00	90.17	359.83	7,526.78	9,293.29	573.34	9,291.55	0.00	0.00	0.00	
16,700.00	90.17	359.83	7,526.47	9,393.29	573.04	9,391.55	0.00	0.00	0.00	
16,800.00	90.17	359.83	7,526.17	9,493.29	572.74	9,491.54	0.00	0.00	0.00	
16,900.00	90.17	359.83	7,525.86	9,593.29	572.43	9,591.54	0.00	0.00	0.00	
17,000.00	90.17	359.83	7,525.56	9,693.28	572.13	9,691.54	0.00	0.00	0.00	
17,100.00	90.17	359.83	7,525.25	9,793.28	571.83	9,791.54	0.00	0.00	0.00	
17,200.00	90.17	359.83	7,524.95	9,893.28	571.53	9,891.54	0.00	0.00	0.00	
17,300.00	90.17	359.83	7,524.64	9,993.28	571.23	9,991.54	0.00	0.00	0.00	
17,400.00	90.17	359.83	7,524.34	10,093.28	570.93	10,091.54	0.00	0.00	0.00	
17,500.00	90.17	359.83	7,524.03	10,193.28	570.63	10,191.54	0.00	0.00	0.00	
17,600.00	90.17	359.83	7,523.73	10,293.28	570.32	10,291.54	0.00	0.00	0.00	
17,700.00	90.17	359.83	7,523.42	10,393.28	570.02	10,391.54	0.00	0.00	0.00	
17,800.00	90.17	359.83	7,523.11	10,493.28	569.72	10,491.54	0.00	0.00	0.00	
17,900.00	90.17	359.83	7,522.81	10,593.28	569.42	10,591.54	0.00	0.00	0.00	
18,000.00	90.17	359.83	7,522.50	10,693.27	569.12	10,691.54	0.00	0.00	0.00	
18,100.00	90.17	359.83	7,522.20	10,793.27	568.82	10,791.54	0.00	0.00	0.00	
18,165.05	90.17	359.83	7,522.00	10,858.32	568.62	10,856.58	0.00	0.00	0.00	
TD Well @ 18165.05ft										

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BUDDY 7-15HZ
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 7-15HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,512.80	1,500.00	9 5/8" Csg	9-5/8	13-1/2	
8,014.52	7,553.00	Top of Production	5-1/2	7-7/8	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,260.81	1,252.00	Fox Hills				
4,298.53	4,248.00	Parkman				
4,677.53	4,627.00	Sussex				
7,514.76	7,387.00	Sharon Springs				
7,647.36	7,462.00	Niobrara				
7,865.50	7,538.00	Nio B				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
250.00	250.00	0.00	0.00	Begin Nudge @ 250.00ft	
930.00	926.41	-1.05	60.36	End Nudge @ 930.00ft	
3,730.00	3,682.16	-9.71	556.12	Begin Drop @ 3730.00ft	
4,240.00	4,189.47	-10.50	601.39	End Drop @ 4240.00ft	
6,887.33	6,836.80	-10.50	601.39	KOP @ 6887.33ft :: DLS = 8"/100'	
8,014.52	7,553.00	707.88	599.22	End Build @ 8014.52ft	
18,165.05	7,522.00	10,858.32	568.62	TD Well @ 18165.05ft	