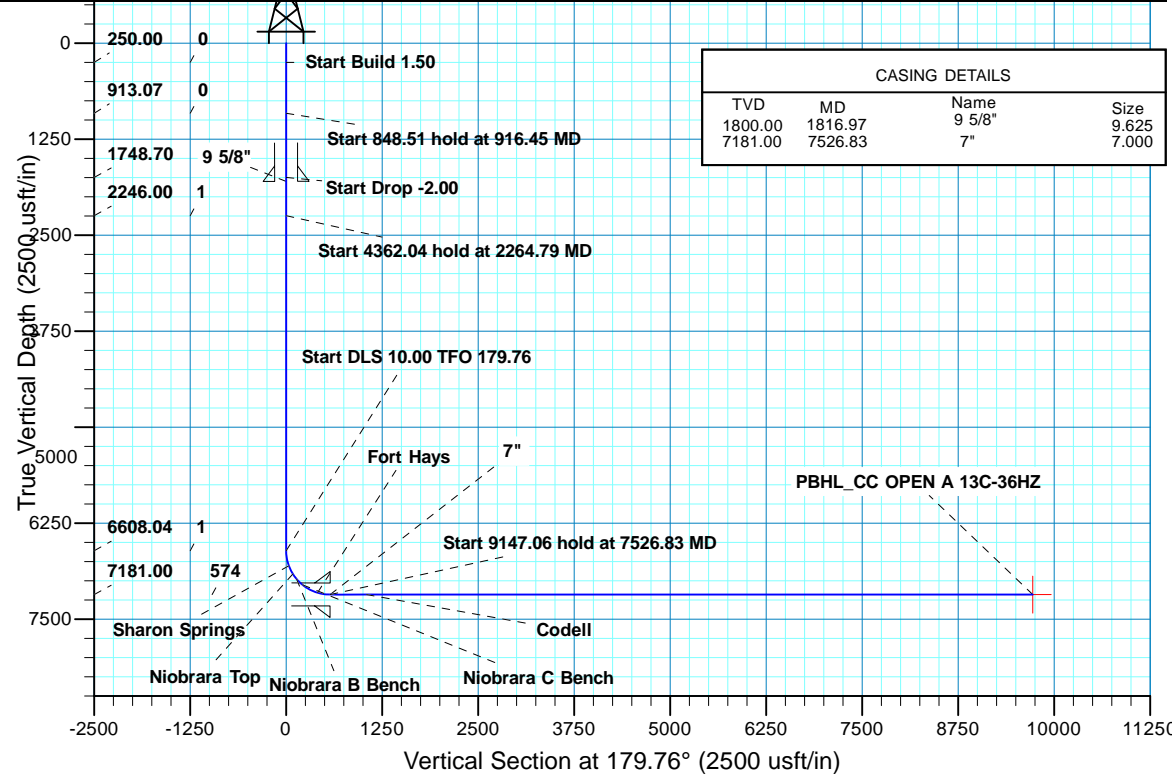
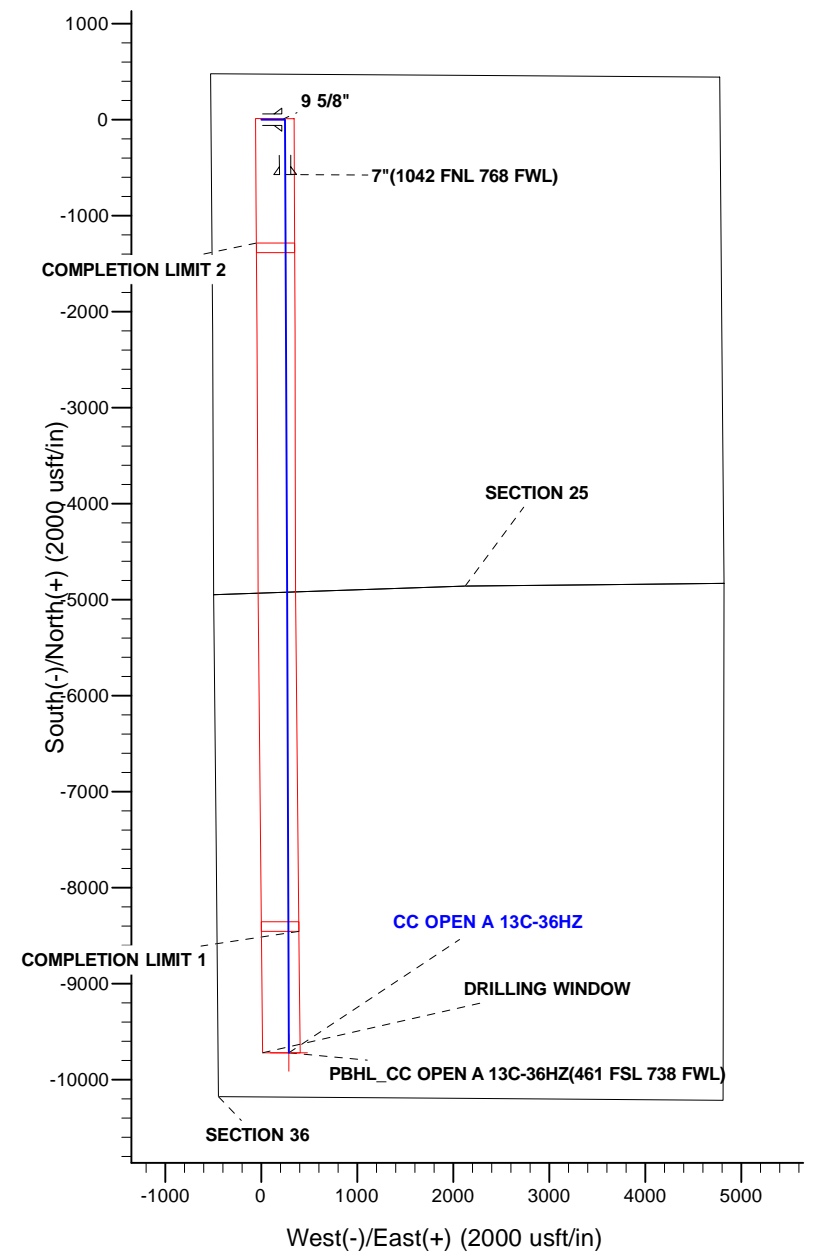


WELL DETAILS: CC OPEN A 13C-36HZ									
GL 4900 & KB 17 @ 4917.00usft (ASSUMED)									
		+N/-S	+E/-W	Northing	Easting	Latitude	Longitude		
		0.00	0.00	14569006.52	1746692.76	40.115465	-104.619871		
SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Target
0.00	0.00	0.00	0.00	0.00	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
916.45	10.00	90.00	913.07	0.00	57.99	1.50	90.00	0.24	
1764.95	10.00	90.00	1748.70	0.00	205.29	0.00	0.00	0.86	
2264.79	0.00	0.00	2246.00	0.00	248.78	2.00	180.00	1.04	
6626.83	0.00	0.00	6608.04	0.00	248.78	0.00	0.00	1.04	
7526.83	90.00	179.76	7181.00	-572.95	251.14	10.00	179.76	574.00	PBHL_CC OPEN A 13C-36HZ
16673.89	90.00	179.76	7181.00	-9719.93	288.78	0.00	0.009721.06		
DESIGN TARGET DETAILS									
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	Point
PBHL	7181.00	-9719.93	288.78	14559287.91	1747023.09	40.088773	-104.618838	Point	
- plan hits target center									
FORMATION TOP DETAILS									
	TVDPath	MDPath	Formation	DipDirInc					
	6807.00	6830.02	Sharon Springs	20.32					
	6911.00	6946.05	Niobrara Top	31.92					
	6978.00	7029.01	Niobrara B Bench	40.22					
	7054.00	7137.93	Niobrara C Bench	51.11					
	7157.00	7360.42	Fort Hays	73.36					
	7181.00	7526.83	Codell	90.00					



CASING DETAILS			
TVD	MD	Name	Size
1800.00	1816.97	9 5/8"	9.625
7181.00	7526.83	7"	7.000



# **US ROCKIES WATTENBERG PLANNING**

**WELD-NAD83-UTMFT13N  
2N-65W-25 CC Open A Pad #1  
CC OPEN A 13C-36HZ**

**PLAN A**

**Plan: PERMIT REV-2**

## **Standard Planning Report**

**17 July, 2015**

<b>Database:</b>	Denver Sales	<b>Local Co-ordinate Reference:</b>	Well CC OPEN A 13C-36HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	GL 4900 & KB 17 @ 4917.00usft (ASSUMED)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	GL 4900 & KB 17 @ 4917.00usft (ASSUMED)
<b>Site:</b>	2N-65W-25 CC Open A Pad #1	<b>North Reference:</b>	True
<b>Well:</b>	CC OPEN A 13C-36HZ	<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>	2N-65W-25 CC Open A Pad #1				
<b>Site Position:</b>		<b>Northing:</b>	14,569,006.76 usft	<b>Latitude:</b>	40.115466
<b>From:</b>	Lat/Long	<b>Easting:</b>	1,746,662.85 usft	<b>Longitude:</b>	-104.619978
<b>Position Uncertainty:</b>	0.00 usft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b>	0.24 °

<b>Well</b>	CC OPEN A 13C-36HZ					
<b>Well Position</b>	<b>+N/-S</b>	-0.36 usft	<b>Northing:</b>	14,569,006.52 usft	<b>Latitude:</b>	40.115465
	<b>+E/-W</b>	29.92 usft	<b>Easting:</b>	1,746,692.76 usft	<b>Longitude:</b>	-104.619871
<b>Position Uncertainty</b>	0.00 usft		<b>Wellhead Elevation:</b>	0.00 usft	<b>Ground Level:</b>	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	1/7/2015	8.28	66.72	52,621

<b>Design</b>	PERMIT REV-2			
<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	179.76

<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	
916.45	10.00	90.00	913.07	0.00	57.99	1.50	1.50	0.00	90.00	
1,764.95	10.00	90.00	1,748.70	0.00	205.29	0.00	0.00	0.00	0.00	
2,264.79	0.00	0.00	2,246.00	0.00	248.78	2.00	-2.00	0.00	180.00	
6,626.83	0.00	0.00	6,608.04	0.00	248.78	0.00	0.00	0.00	0.00	
7,526.83	90.00	179.76	7,181.00	-572.95	251.14	10.00	10.00	19.97	179.76	
16,673.89	90.00	179.76	7,181.00	-9,719.93	288.78	0.00	0.00	0.00	0.00	PBHL_CC OPEN A 1:

<b>Database:</b>	Denver Sales	<b>Local Co-ordinate Reference:</b>	Well CC OPEN A 13C-36HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	GL 4900 & KB 17 @ 4917.00usft (ASSUMED)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	GL 4900 & KB 17 @ 4917.00usft (ASSUMED)
<b>Site:</b>	2N-65W-25 CC Open A Pad #1	<b>North Reference:</b>	True
<b>Well:</b>	CC OPEN A 13C-36HZ	<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	0.00
100.00	0.00	0.00	100.00	0.00	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	0.00
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 1.50</b>										
300.00	0.75	90.00	300.00	0.00	0.33	0.00	1.50	1.50	0.00	0.00
400.00	2.25	90.00	399.96	0.00	2.94	0.01	1.50	1.50	0.00	0.00
500.00	3.75	90.00	499.82	0.00	8.18	0.03	1.50	1.50	0.00	0.00
600.00	5.25	90.00	599.51	0.00	16.02	0.07	1.50	1.50	0.00	0.00
700.00	6.75	90.00	698.96	0.00	26.48	0.11	1.50	1.50	0.00	0.00
800.00	8.25	90.00	798.10	0.00	39.53	0.17	1.50	1.50	0.00	0.00
900.00	9.75	90.00	896.87	0.00	55.17	0.23	1.50	1.50	0.00	0.00
916.45	10.00	90.00	913.07	0.00	57.99	0.24	1.50	1.50	0.00	0.00
<b>Start 848.51 hold at 916.45 MD</b>										
1,000.00	10.00	90.00	995.36	0.00	72.50	0.30	0.00	0.00	0.00	0.00
1,100.00	10.00	90.00	1,093.84	0.00	89.86	0.38	0.00	0.00	0.00	0.00
1,200.00	10.00	90.00	1,192.32	0.00	107.21	0.45	0.00	0.00	0.00	0.00
1,300.00	10.00	90.00	1,290.80	0.00	124.57	0.52	0.00	0.00	0.00	0.00
1,400.00	10.00	90.00	1,389.28	0.00	141.93	0.59	0.00	0.00	0.00	0.00
1,500.00	10.00	90.00	1,487.76	0.00	159.29	0.67	0.00	0.00	0.00	0.00
1,600.00	10.00	90.00	1,586.25	0.00	176.65	0.74	0.00	0.00	0.00	0.00
1,700.00	10.00	90.00	1,684.73	0.00	194.01	0.81	0.00	0.00	0.00	0.00
1,764.95	10.00	90.00	1,748.70	0.00	205.29	0.86	0.00	0.00	0.00	0.00
<b>Start Drop -2.00</b>										
1,800.00	9.30	90.00	1,783.25	0.00	211.16	0.88	2.00	-2.00	0.00	0.00
1,816.97	8.96	90.00	1,800.00	0.00	213.85	0.90	2.00	-2.00	0.00	0.00
<b>9 5/8"</b>										
1,900.00	7.30	90.00	1,882.19	0.00	225.59	0.94	2.00	-2.00	0.00	0.00
2,000.00	5.30	90.00	1,981.59	0.00	236.55	0.99	2.00	-2.00	0.00	0.00
2,100.00	3.30	90.00	2,081.30	0.00	244.04	1.02	2.00	-2.00	0.00	0.00
2,200.00	1.30	90.00	2,181.21	0.00	248.05	1.04	2.00	-2.00	0.00	0.00
2,264.79	0.00	0.00	2,246.00	0.00	248.78	1.04	2.00	-2.00	0.00	0.00
<b>Start 4362.04 hold at 2264.79 MD</b>										
2,300.00	0.00	0.00	2,281.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,381.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,481.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,581.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,681.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,781.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,881.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	2,981.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,081.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,181.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,281.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,381.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,481.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,581.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,681.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,781.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,881.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	3,981.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00

<b>Database:</b>	Denver Sales	<b>Local Co-ordinate Reference:</b>	Well CC OPEN A 13C-36HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	GL 4900 & KB 17 @ 4917.00usft (ASSUMED)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	GL 4900 & KB 17 @ 4917.00usft (ASSUMED)
<b>Site:</b>	2N-65W-25 CC Open A Pad #1	<b>North Reference:</b>	True
<b>Well:</b>	CC OPEN A 13C-36HZ	<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)	
4,100.00	0.00	0.00	4,081.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,181.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,281.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,381.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,481.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,581.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,681.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,781.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,881.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	4,981.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,081.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,181.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,281.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,381.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,481.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,581.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,681.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,781.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,881.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	5,981.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,081.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,181.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,281.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,381.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,481.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,581.21	0.00	248.78	1.04	0.00	0.00	0.00	0.00
6,626.83	0.00	0.00	6,608.04	0.00	248.78	1.04	0.00	0.00	0.00	0.00
<b>Start DLS 10.00 TFO 179.76</b>										
6,700.00	7.32	179.76	6,681.01	-4.67	248.80	5.71	10.00	10.00	0.00	0.00
6,800.00	17.32	179.76	6,778.59	-25.97	248.89	27.01	10.00	10.00	0.00	0.00
6,830.02	20.32	179.76	6,807.00	-35.65	248.93	36.70	10.00	10.00	0.00	0.00
<b>Sharon Springs</b>										
6,900.00	27.32	179.76	6,870.98	-63.89	249.04	64.94	10.00	10.00	0.00	0.00
6,946.05	31.92	179.76	6,911.00	-86.65	249.14	87.69	10.00	10.00	0.00	0.00
<b>Niobrara Top</b>										
7,000.00	37.32	179.76	6,955.38	-117.29	249.26	118.33	10.00	10.00	0.00	0.00
7,029.01	40.22	179.76	6,978.00	-135.45	249.34	136.50	10.00	10.00	0.00	0.00
<b>Niobrara B Bench</b>										
7,100.00	47.32	179.76	7,029.23	-184.52	249.54	185.57	10.00	10.00	0.00	0.00
7,137.93	51.11	179.76	7,054.00	-213.23	249.66	214.28	10.00	10.00	0.00	0.00
<b>Niobrara C Bench</b>										
7,200.00	57.32	179.76	7,090.28	-263.56	249.86	264.61	10.00	10.00	0.00	0.00
7,300.00	67.32	179.76	7,136.68	-352.00	250.23	353.05	10.00	10.00	0.00	0.00
7,360.42	73.36	179.76	7,157.00	-408.87	250.46	409.92	10.00	10.00	0.00	0.00
<b>Fort Hays</b>										
7,400.00	77.32	179.76	7,167.02	-447.16	250.62	448.20	10.00	10.00	0.00	0.00
7,500.00	87.32	179.76	7,180.37	-546.13	251.03	547.18	10.00	10.00	0.00	0.00
7,526.83	90.00	179.76	7,181.00	-572.95	251.14	574.00	10.00	10.00	0.00	0.00
<b>Start 9147.06 hold at 7526.83 MD - Codell - 7"(1042 FNL 768 FWL)</b>										
7,600.00	90.00	179.76	7,181.00	-646.12	251.44	647.17	0.00	0.00	0.00	0.00
7,700.00	90.00	179.76	7,181.00	-746.12	251.85	747.17	0.00	0.00	0.00	0.00

<b>Database:</b>	Denver Sales	<b>Local Co-ordinate Reference:</b>	Well CC OPEN A 13C-36HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	GL 4900 & KB 17 @ 4917.00usft (ASSUMED)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	GL 4900 & KB 17 @ 4917.00usft (ASSUMED)
<b>Site:</b>	2N-65W-25 CC Open A Pad #1	<b>North Reference:</b>	True
<b>Well:</b>	CC OPEN A 13C-36HZ	<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)	
7,800.00	90.00	179.76	7,181.00	-846.12	252.26	847.17	0.00	0.00	0.00	
7,900.00	90.00	179.76	7,181.00	-946.12	252.67	947.17	0.00	0.00	0.00	
8,000.00	90.00	179.76	7,181.00	-1,046.12	253.09	1,047.17	0.00	0.00	0.00	
8,100.00	90.00	179.76	7,181.00	-1,146.12	253.50	1,147.17	0.00	0.00	0.00	
8,200.00	90.00	179.76	7,181.00	-1,246.12	253.91	1,247.17	0.00	0.00	0.00	
8,300.00	90.00	179.76	7,181.00	-1,346.12	254.32	1,347.17	0.00	0.00	0.00	
8,400.00	90.00	179.76	7,181.00	-1,446.11	254.73	1,447.17	0.00	0.00	0.00	
8,500.00	90.00	179.76	7,181.00	-1,546.11	255.14	1,547.17	0.00	0.00	0.00	
8,600.00	90.00	179.76	7,181.00	-1,646.11	255.55	1,647.17	0.00	0.00	0.00	
8,700.00	90.00	179.76	7,181.00	-1,746.11	255.97	1,747.17	0.00	0.00	0.00	
8,800.00	90.00	179.76	7,181.00	-1,846.11	256.38	1,847.17	0.00	0.00	0.00	
8,900.00	90.00	179.76	7,181.00	-1,946.11	256.79	1,947.17	0.00	0.00	0.00	
9,000.00	90.00	179.76	7,181.00	-2,046.11	257.20	2,047.17	0.00	0.00	0.00	
9,100.00	90.00	179.76	7,181.00	-2,146.11	257.61	2,147.17	0.00	0.00	0.00	
9,200.00	90.00	179.76	7,181.00	-2,246.11	258.02	2,247.17	0.00	0.00	0.00	
9,300.00	90.00	179.76	7,181.00	-2,346.11	258.43	2,347.17	0.00	0.00	0.00	
9,400.00	90.00	179.76	7,181.00	-2,446.11	258.85	2,447.17	0.00	0.00	0.00	
9,500.00	90.00	179.76	7,181.00	-2,546.11	259.26	2,547.17	0.00	0.00	0.00	
9,600.00	90.00	179.76	7,181.00	-2,646.10	259.67	2,647.17	0.00	0.00	0.00	
9,700.00	90.00	179.76	7,181.00	-2,746.10	260.08	2,747.17	0.00	0.00	0.00	
9,800.00	90.00	179.76	7,181.00	-2,846.10	260.49	2,847.17	0.00	0.00	0.00	
9,900.00	90.00	179.76	7,181.00	-2,946.10	260.90	2,947.17	0.00	0.00	0.00	
10,000.00	90.00	179.76	7,181.00	-3,046.10	261.32	3,047.17	0.00	0.00	0.00	
10,100.00	90.00	179.76	7,181.00	-3,146.10	261.73	3,147.17	0.00	0.00	0.00	
10,200.00	90.00	179.76	7,181.00	-3,246.10	262.14	3,247.17	0.00	0.00	0.00	
10,300.00	90.00	179.76	7,181.00	-3,346.10	262.55	3,347.17	0.00	0.00	0.00	
10,400.00	90.00	179.76	7,181.00	-3,446.10	262.96	3,447.17	0.00	0.00	0.00	
10,500.00	90.00	179.76	7,181.00	-3,546.10	263.37	3,547.17	0.00	0.00	0.00	
10,600.00	90.00	179.76	7,181.00	-3,646.10	263.78	3,647.17	0.00	0.00	0.00	
10,700.00	90.00	179.76	7,181.00	-3,746.10	264.20	3,747.17	0.00	0.00	0.00	
10,800.00	90.00	179.76	7,181.00	-3,846.09	264.61	3,847.17	0.00	0.00	0.00	
10,900.00	90.00	179.76	7,181.00	-3,946.09	265.02	3,947.17	0.00	0.00	0.00	
11,000.00	90.00	179.76	7,181.00	-4,046.09	265.43	4,047.17	0.00	0.00	0.00	
11,100.00	90.00	179.76	7,181.00	-4,146.09	265.84	4,147.17	0.00	0.00	0.00	
11,200.00	90.00	179.76	7,181.00	-4,246.09	266.25	4,247.17	0.00	0.00	0.00	
11,300.00	90.00	179.76	7,181.00	-4,346.09	266.67	4,347.17	0.00	0.00	0.00	
11,400.00	90.00	179.76	7,181.00	-4,446.09	267.08	4,447.17	0.00	0.00	0.00	
11,500.00	90.00	179.76	7,181.00	-4,546.09	267.49	4,547.17	0.00	0.00	0.00	
11,600.00	90.00	179.76	7,181.00	-4,646.09	267.90	4,647.17	0.00	0.00	0.00	
11,700.00	90.00	179.76	7,181.00	-4,746.09	268.31	4,747.17	0.00	0.00	0.00	
11,800.00	90.00	179.76	7,181.00	-4,846.09	268.72	4,847.17	0.00	0.00	0.00	
11,900.00	90.00	179.76	7,181.00	-4,946.09	269.13	4,947.17	0.00	0.00	0.00	
12,000.00	90.00	179.76	7,181.00	-5,046.08	269.55	5,047.17	0.00	0.00	0.00	
12,100.00	90.00	179.76	7,181.00	-5,146.08	269.96	5,147.17	0.00	0.00	0.00	
12,200.00	90.00	179.76	7,181.00	-5,246.08	270.37	5,247.17	0.00	0.00	0.00	
12,300.00	90.00	179.76	7,181.00	-5,346.08	270.78	5,347.17	0.00	0.00	0.00	
12,400.00	90.00	179.76	7,181.00	-5,446.08	271.19	5,447.17	0.00	0.00	0.00	
12,500.00	90.00	179.76	7,181.00	-5,546.08	271.60	5,547.17	0.00	0.00	0.00	
12,600.00	90.00	179.76	7,181.00	-5,646.08	272.02	5,647.17	0.00	0.00	0.00	
12,700.00	90.00	179.76	7,181.00	-5,746.08	272.43	5,747.17	0.00	0.00	0.00	
12,800.00	90.00	179.76	7,181.00	-5,846.08	272.84	5,847.17	0.00	0.00	0.00	
12,900.00	90.00	179.76	7,181.00	-5,946.08	273.25	5,947.17	0.00	0.00	0.00	

<b>Database:</b>	Denver Sales	<b>Local Co-ordinate Reference:</b>	Well CC OPEN A 13C-36HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	GL 4900 & KB 17 @ 4917.00usft (ASSUMED)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	GL 4900 & KB 17 @ 4917.00usft (ASSUMED)
<b>Site:</b>	2N-65W-25 CC Open A Pad #1	<b>North Reference:</b>	True
<b>Well:</b>	CC OPEN A 13C-36HZ	<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)	
13,000.00	90.00	179.76	7,181.00	-6,046.08	273.66	6,047.17	0.00	0.00	0.00	
13,100.00	90.00	179.76	7,181.00	-6,146.08	274.07	6,147.17	0.00	0.00	0.00	
13,200.00	90.00	179.76	7,181.00	-6,246.07	274.48	6,247.17	0.00	0.00	0.00	
13,300.00	90.00	179.76	7,181.00	-6,346.07	274.90	6,347.17	0.00	0.00	0.00	
13,400.00	90.00	179.76	7,181.00	-6,446.07	275.31	6,447.17	0.00	0.00	0.00	
13,500.00	90.00	179.76	7,181.00	-6,546.07	275.72	6,547.17	0.00	0.00	0.00	
13,600.00	90.00	179.76	7,181.00	-6,646.07	276.13	6,647.17	0.00	0.00	0.00	
13,700.00	90.00	179.76	7,181.00	-6,746.07	276.54	6,747.17	0.00	0.00	0.00	
13,800.00	90.00	179.76	7,181.00	-6,846.07	276.95	6,847.17	0.00	0.00	0.00	
13,900.00	90.00	179.76	7,181.00	-6,946.07	277.36	6,947.17	0.00	0.00	0.00	
14,000.00	90.00	179.76	7,181.00	-7,046.07	277.78	7,047.17	0.00	0.00	0.00	
14,100.00	90.00	179.76	7,181.00	-7,146.07	278.19	7,147.17	0.00	0.00	0.00	
14,200.00	90.00	179.76	7,181.00	-7,246.07	278.60	7,247.17	0.00	0.00	0.00	
14,300.00	90.00	179.76	7,181.00	-7,346.07	279.01	7,347.17	0.00	0.00	0.00	
14,400.00	90.00	179.76	7,181.00	-7,446.06	279.42	7,447.17	0.00	0.00	0.00	
14,500.00	90.00	179.76	7,181.00	-7,546.06	279.83	7,547.17	0.00	0.00	0.00	
14,600.00	90.00	179.76	7,181.00	-7,646.06	280.25	7,647.17	0.00	0.00	0.00	
14,700.00	90.00	179.76	7,181.00	-7,746.06	280.66	7,747.17	0.00	0.00	0.00	
14,800.00	90.00	179.76	7,181.00	-7,846.06	281.07	7,847.17	0.00	0.00	0.00	
14,900.00	90.00	179.76	7,181.00	-7,946.06	281.48	7,947.17	0.00	0.00	0.00	
15,000.00	90.00	179.76	7,181.00	-8,046.06	281.89	8,047.17	0.00	0.00	0.00	
15,100.00	90.00	179.76	7,181.00	-8,146.06	282.30	8,147.17	0.00	0.00	0.00	
15,200.00	90.00	179.76	7,181.00	-8,246.06	282.71	8,247.17	0.00	0.00	0.00	
15,300.00	90.00	179.76	7,181.00	-8,346.06	283.13	8,347.17	0.00	0.00	0.00	
15,400.00	90.00	179.76	7,181.00	-8,446.06	283.54	8,447.17	0.00	0.00	0.00	
15,500.00	90.00	179.76	7,181.00	-8,546.06	283.95	8,547.17	0.00	0.00	0.00	
15,600.00	90.00	179.76	7,181.00	-8,646.05	284.36	8,647.17	0.00	0.00	0.00	
15,700.00	90.00	179.76	7,181.00	-8,746.05	284.77	8,747.17	0.00	0.00	0.00	
15,800.00	90.00	179.76	7,181.00	-8,846.05	285.18	8,847.17	0.00	0.00	0.00	
15,900.00	90.00	179.76	7,181.00	-8,946.05	285.60	8,947.17	0.00	0.00	0.00	
16,000.00	90.00	179.76	7,181.00	-9,046.05	286.01	9,047.17	0.00	0.00	0.00	
16,100.00	90.00	179.76	7,181.00	-9,146.05	286.42	9,147.17	0.00	0.00	0.00	
16,200.00	90.00	179.76	7,181.00	-9,246.05	286.83	9,247.17	0.00	0.00	0.00	
16,300.00	90.00	179.76	7,181.00	-9,346.05	287.24	9,347.17	0.00	0.00	0.00	
16,400.00	90.00	179.76	7,181.00	-9,446.05	287.65	9,447.17	0.00	0.00	0.00	
16,500.00	90.00	179.76	7,181.00	-9,546.05	288.06	9,547.17	0.00	0.00	0.00	
16,600.00	90.00	179.76	7,181.00	-9,646.05	288.48	9,647.17	0.00	0.00	0.00	
16,673.89	90.00	179.76	7,181.00	-9,719.93	288.78	9,721.06	0.00	0.00	0.00	
<b>TD at 16673.89 - PBHL_CC OPEN A 13C-36HZ(460 FSL 738 FWL)</b>										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
PBHL_CC OPEN A 13C - hit/miss target - Shape - Point	0.00	0.00	7,181.00	-9,719.93	288.78	14,559,287.91	1,747,023.09	40.088773	-104.618839	

<b>Database:</b>	Denver Sales	<b>Local Co-ordinate Reference:</b>	Well CC OPEN A 13C-36HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	GL 4900 & KB 17 @ 4917.00usft (ASSUMED)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	GL 4900 & KB 17 @ 4917.00usft (ASSUMED)
<b>Site:</b>	2N-65W-25 CC Open A Pad #1	<b>North Reference:</b>	True
<b>Well:</b>	CC OPEN A 13C-36HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	PLAN A		
<b>Design:</b>	PERMIT REV-2		

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,816.97	1,800.00	9 5/8"	9.625	13.500	
7,526.83	7,181.00	7"(1042 FNL 768 FWL)	7.000	8.750	

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,830.02	6,802.00	Sharon Springs			
6,946.05	6,906.00	Niobrara Top			
7,029.01	6,973.00	Niobrara B Bench			
7,137.93	7,049.00	Niobrara C Bench			
7,360.42	7,152.00	Fort Hays			
7,526.83	7,176.00	Codell			

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	
916.45	913.07	0.00	57.99	Start 848.51 hold at 916.45 MD	
1,764.95	1,748.70	0.00	205.29	Start Drop -2.00	
2,264.79	2,246.00	0.00	248.78	Start 4362.04 hold at 2264.79 MD	
6,626.83	6,608.04	0.00	248.78	Start DLS 10.00 TFO 179.76	
7,526.83	7,181.00	-572.95	251.14	Start 9147.06 hold at 7526.83 MD	
16,673.89	7,181.00	-9,719.93	288.78	TD at 16673.89	