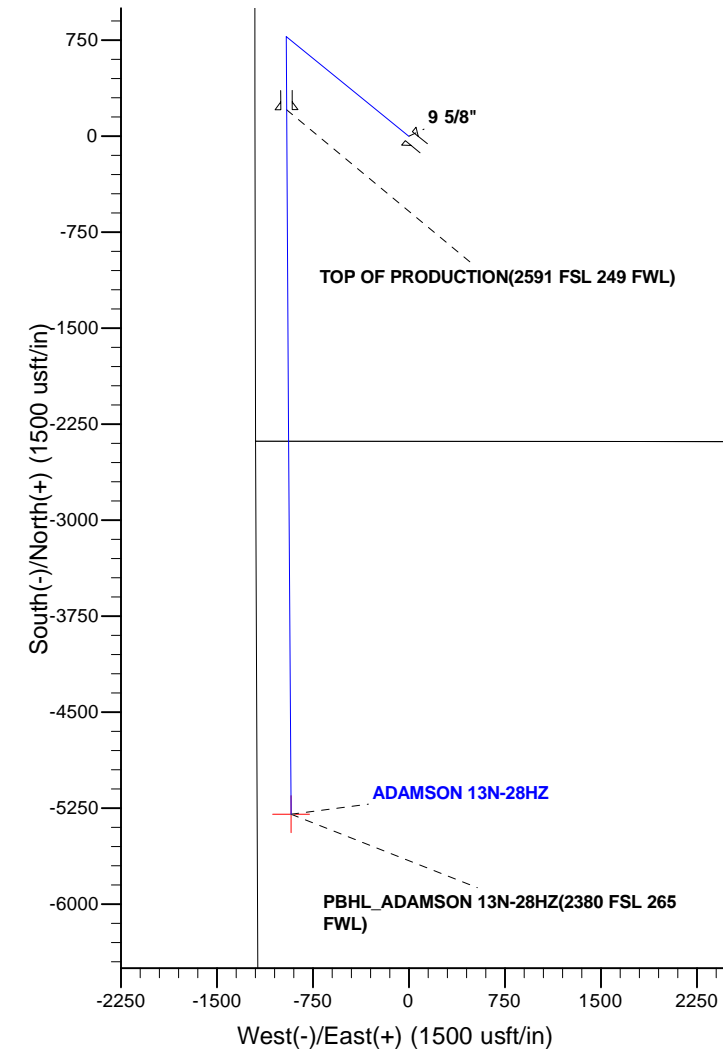
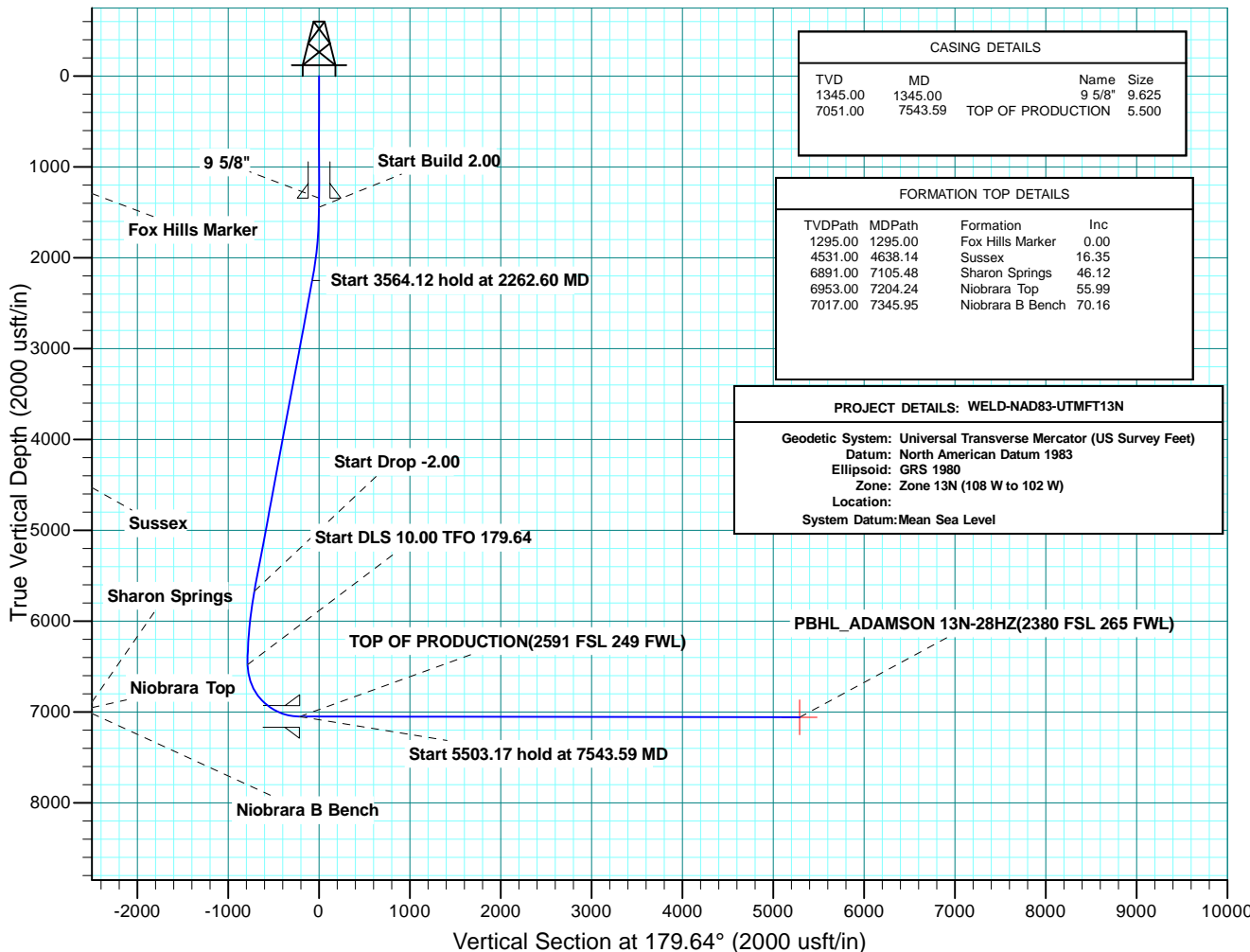


SHL: ADAMSON 13N-28HZ								
GL 4892 & KB 17 @ 4909.00usft (PERMIT)								
		+N-S 0.00	+E-W 0.00	Northing 14571804.89	Easting 1731516.21	Latitude 40.123315	Longitude -104.674117	
DESIGN TARGET DETAILS								
Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	7058.00	-5296.20	-920.48	14566505.35	1730615.16	40.108771	-104.677409	Point
- plan hits target center								
SECTION DETAILS								
MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1445.00	0.00	0.00	1445.00	0.00	0.00	0.00	0.00	0.00
2262.60	16.35	309.10	2251.55	73.09	-89.92	2.00	309.10	-73.65
5826.72	16.35	309.10	5671.49	705.99	-868.59	0.00	0.00	-711.43
6644.32	0.00	0.00	6478.04	779.08	-958.51	2.00	180.00	-785.09
7543.59	89.93	179.64	7051.00	206.86	-954.93	10.00	179.64	-212.86
13046.76	89.93	179.64	7058.00	-5296.20	-920.48	0.00	0.00	5290.31
PBHL_ADAMSON 13N-28HZ(2380 FSL 265FWL)								



# **US ROCKIES WATTENBERG PLANNING**

**WELD-NAD83-UTMFT13N**

**2N-65W-21 ADAMSON 22-21HZ PAD**

**ADAMSON 13N-28HZ**

**PLAN A**

**Plan: PERMIT REV-1**

## **Standard Planning Report**

**22 April, 2015**

<b>Database:</b>	Denver Sales	<b>Local Co-ordinate Reference:</b>	Well ADAMSON 13N-28HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	GL 4892 & KB 17 @ 4909.00usft (PERMIT)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	GL 4892 & KB 17 @ 4909.00usft (PERMIT)
<b>Site:</b>	2N-65W-21 ADAMSON 22-21HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	ADAMSON 13N-28HZ	<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-21 ADAMSON 22-21HZ PAD						
Site Position:			Northing:		14,571,804.88 usft		Latitude:		40.123315			
From:			Easting:		1,731,516.21 usft		Longitude:		-104.674117			
Position Uncertainty:			0.00 usft		Slot Radius:		13.200 in		Grid Convergence:		0.21	

Well	ADAMSON 13N-28HZ					
Well Position	+N/-S	0.00 usft	Northing:	14,571,804.88 usft	Latitude:	40.123315
	+E/-W	0.00 usft	Easting:	1,731,516.21 usft	Longitude:	-104.674117
Position Uncertainty		3.28 usft	Wellhead Elevation:	0.00 usft	Ground Level:	4,892.00 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	2/5/2015	8.30	66.72	52,611

<b>Design</b>	PERMIT REV-1			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	179.64

<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	
1,445.00	0.00	0.00	1,445.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,262.60	16.35	309.10	2,251.55	73.09	-89.92	2.00	2.00	0.00	309.10	
5,826.72	16.35	309.10	5,671.49	705.99	-868.59	0.00	0.00	0.00	0.00	
6,644.32	0.00	0.00	6,478.04	779.08	-958.51	2.00	-2.00	0.00	180.00	
7,543.59	89.93	179.64	7,051.00	206.86	-954.93	10.00	10.00	19.98	179.64	
13,046.76	89.93	179.64	7,058.00	-5,296.20	-920.48	0.00	0.00	0.00	0.00	PBHL_ADAMSON 13

<b>Database:</b>	Denver Sales	<b>Local Co-ordinate Reference:</b>	Well ADAMSON 13N-28HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	GL 4892 & KB 17 @ 4909.00usft (PERMIT)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	GL 4892 & KB 17 @ 4909.00usft (PERMIT)
<b>Site:</b>	2N-65W-21 ADAMSON 22-21HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	ADAMSON 13N-28HZ	<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
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,295.00	0.00	0.00	1,295.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Fox Hills Marker</b>									
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,345.00	0.00	0.00	1,345.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>9 5/8"</b>									
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,445.00	0.00	0.00	1,445.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
1,500.00	1.10	309.10	1,499.99	0.33	-0.41	-0.34	2.00	2.00	0.00
1,600.00	3.10	309.10	1,599.92	2.64	-3.25	-2.66	2.00	2.00	0.00
1,700.00	5.10	309.10	1,699.66	7.15	-8.80	-7.21	2.00	2.00	0.00
1,800.00	7.10	309.10	1,799.09	13.86	-17.05	-13.96	2.00	2.00	0.00
1,900.00	9.10	309.10	1,898.09	22.74	-27.98	-22.92	2.00	2.00	0.00
2,000.00	11.10	309.10	1,996.53	33.80	-41.59	-34.06	2.00	2.00	0.00
2,100.00	13.10	309.10	2,094.30	47.02	-57.85	-47.39	2.00	2.00	0.00
2,200.00	15.10	309.10	2,191.29	62.39	-76.76	-62.87	2.00	2.00	0.00
2,262.60	16.35	309.10	2,251.55	73.09	-89.92	-73.65	2.00	2.00	0.00
<b>Start 3564.12 hold at 2262.60 MD</b>									
2,300.00	16.35	309.10	2,287.43	79.73	-98.09	-80.34	0.00	0.00	0.00
2,400.00	16.35	309.10	2,383.38	97.49	-119.94	-98.24	0.00	0.00	0.00
2,500.00	16.35	309.10	2,479.34	115.25	-141.79	-116.13	0.00	0.00	0.00
2,599.99	16.35	309.10	2,575.29	133.00	-163.63	-134.03	0.00	0.00	0.00
2,699.99	16.35	309.10	2,671.25	150.76	-185.48	-151.92	0.00	0.00	0.00
2,799.99	16.35	309.10	2,767.20	168.52	-207.33	-169.82	0.00	0.00	0.00
2,899.99	16.35	309.10	2,863.16	186.28	-229.18	-187.71	0.00	0.00	0.00
2,999.99	16.35	309.10	2,959.11	204.03	-251.02	-205.61	0.00	0.00	0.00
3,099.99	16.35	309.10	3,055.07	221.79	-272.87	-223.50	0.00	0.00	0.00
3,199.99	16.35	309.10	3,151.02	239.55	-294.72	-241.39	0.00	0.00	0.00
3,299.99	16.35	309.10	3,246.98	257.31	-316.57	-259.29	0.00	0.00	0.00
3,399.99	16.35	309.10	3,342.93	275.06	-338.41	-277.18	0.00	0.00	0.00
3,499.99	16.35	309.10	3,438.89	292.82	-360.26	-295.08	0.00	0.00	0.00
3,599.99	16.35	309.10	3,534.84	310.58	-382.11	-312.97	0.00	0.00	0.00
3,699.99	16.35	309.10	3,630.80	328.34	-403.95	-330.87	0.00	0.00	0.00
3,799.99	16.35	309.10	3,726.75	346.09	-425.80	-348.76	0.00	0.00	0.00
3,899.99	16.35	309.10	3,822.71	363.85	-447.65	-366.66	0.00	0.00	0.00
3,999.99	16.35	309.10	3,918.66	381.61	-469.50	-384.55	0.00	0.00	0.00
4,099.99	16.35	309.10	4,014.62	399.37	-491.34	-402.44	0.00	0.00	0.00
4,199.99	16.35	309.10	4,110.57	417.12	-513.19	-420.34	0.00	0.00	0.00
4,299.99	16.35	309.10	4,206.53	434.88	-535.04	-438.23	0.00	0.00	0.00
4,399.99	16.35	309.10	4,302.48	452.64	-556.88	-456.13	0.00	0.00	0.00
4,499.99	16.35	309.10	4,398.44	470.40	-578.73	-474.02	0.00	0.00	0.00

<b>Database:</b>	Denver Sales	<b>Local Co-ordinate Reference:</b>	Well ADAMSON 13N-28HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	GL 4892 & KB 17 @ 4909.00usft (PERMIT)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	GL 4892 & KB 17 @ 4909.00usft (PERMIT)
<b>Site:</b>	2N-65W-21 ADAMSON 22-21HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	ADAMSON 13N-28HZ	<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)
4,599.99	16.35	309.10	4,494.39	488.15	-600.58	-491.92	0.00	0.00	0.00
4,638.14	16.35	309.10	4,531.00	494.93	-608.91	-498.74	0.00	0.00	0.00
<b>Sussex</b>									
4,699.99	16.35	309.10	4,590.34	505.91	-622.43	-509.81	0.00	0.00	0.00
4,799.99	16.35	309.10	4,686.30	523.67	-644.27	-527.71	0.00	0.00	0.00
4,899.99	16.35	309.10	4,782.25	541.43	-666.12	-545.60	0.00	0.00	0.00
4,999.99	16.35	309.10	4,878.21	559.18	-687.97	-563.49	0.00	0.00	0.00
5,099.99	16.35	309.10	4,974.16	576.94	-709.82	-581.39	0.00	0.00	0.00
5,199.99	16.35	309.10	5,070.12	594.70	-731.66	-599.28	0.00	0.00	0.00
5,299.99	16.35	309.10	5,166.07	612.46	-753.51	-617.18	0.00	0.00	0.00
5,399.99	16.35	309.10	5,262.03	630.21	-775.36	-635.07	0.00	0.00	0.00
5,499.99	16.35	309.10	5,357.98	647.97	-797.20	-652.97	0.00	0.00	0.00
5,599.99	16.35	309.10	5,453.94	665.73	-819.05	-670.86	0.00	0.00	0.00
5,699.99	16.35	309.10	5,549.89	683.49	-840.90	-688.76	0.00	0.00	0.00
5,799.99	16.35	309.10	5,645.85	701.24	-862.75	-706.65	0.00	0.00	0.00
5,826.72	16.35	309.10	5,671.49	705.99	-868.59	-711.43	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
5,899.99	14.89	309.10	5,742.06	718.43	-883.89	-723.97	2.00	-2.00	0.00
5,999.99	12.89	309.10	5,839.13	733.57	-902.52	-739.22	2.00	-2.00	0.00
6,099.99	10.89	309.10	5,936.98	746.56	-918.50	-752.32	2.00	-2.00	0.00
6,199.99	8.89	309.10	6,035.49	757.39	-931.82	-763.23	2.00	-2.00	0.00
6,299.99	6.89	309.10	6,134.54	766.04	-942.47	-771.95	2.00	-2.00	0.00
6,399.99	4.89	309.10	6,234.01	772.51	-950.43	-778.47	2.00	-2.00	0.00
6,499.99	2.89	309.10	6,333.77	776.79	-955.69	-782.78	2.00	-2.00	0.00
6,599.99	0.89	309.10	6,433.71	778.86	-958.24	-784.87	2.00	-2.00	0.00
6,644.32	0.00	0.00	6,478.04	779.08	-958.51	-785.09	2.00	-2.00	0.00
<b>Start DLS 10.00 TFO 179.64</b>									
6,699.99	5.57	179.64	6,533.62	776.38	-958.49	-782.38	10.00	10.00	0.00
6,799.99	15.57	179.64	6,631.80	758.06	-958.38	-764.07	10.00	10.00	0.00
6,899.99	25.57	179.64	6,725.31	722.98	-958.16	-728.98	10.00	10.00	0.00
6,999.99	35.57	179.64	6,811.30	672.19	-957.84	-678.19	10.00	10.00	0.00
7,099.99	45.57	179.64	6,887.17	607.24	-957.43	-613.24	10.00	10.00	0.00
7,105.48	46.12	179.64	6,891.00	603.29	-957.41	-609.30	10.00	10.00	0.00
<b>Sharon Springs</b>									
7,199.99	55.57	179.64	6,950.61	530.10	-956.95	-536.10	10.00	10.00	0.00
7,204.24	55.99	179.64	6,953.00	526.58	-956.93	-532.59	10.00	10.00	0.00
<b>Niobrara Top</b>									
7,299.99	65.57	179.64	6,999.69	443.12	-956.40	-449.12	10.00	10.00	0.00
7,345.95	70.16	179.64	7,017.00	400.56	-956.14	-406.56	10.00	10.00	0.00
<b>Niobrara B Bench</b>									
7,399.99	75.57	179.64	7,032.92	348.94	-955.82	-354.94	10.00	10.00	0.00
7,499.99	85.57	179.64	7,049.28	250.42	-955.20	-256.41	10.00	10.00	0.00
7,543.59	89.93	179.64	7,051.00	206.86	-954.93	-212.85	10.00	10.00	0.00
<b>Start 5503.17 hold at 7543.59 MD - TOP OF PRODUCTION(2591 FSL 249 FWL)</b>									
7,599.98	89.93	179.64	7,051.07	150.46	-954.57	-156.46	0.00	0.00	0.00
7,699.98	89.93	179.64	7,051.20	50.47	-953.95	-56.46	0.00	0.00	0.00
7,799.98	89.93	179.64	7,051.32	-49.53	-953.32	43.54	0.00	0.00	0.00
7,899.98	89.93	179.64	7,051.45	-149.53	-952.69	143.54	0.00	0.00	0.00
7,999.98	89.93	179.64	7,051.58	-249.53	-952.07	243.54	0.00	0.00	0.00
8,099.98	89.93	179.64	7,051.71	-349.52	-951.44	343.54	0.00	0.00	0.00
8,199.98	89.93	179.64	7,051.83	-449.52	-950.82	443.54	0.00	0.00	0.00
8,299.98	89.93	179.64	7,051.96	-549.52	-950.19	543.54	0.00	0.00	0.00
8,399.98	89.93	179.64	7,052.09	-649.52	-949.56	643.54	0.00	0.00	0.00

<b>Database:</b>	Denver Sales	<b>Local Co-ordinate Reference:</b>	Well ADAMSON 13N-28HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	GL 4892 & KB 17 @ 4909.00usft (PERMIT)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	GL 4892 & KB 17 @ 4909.00usft (PERMIT)
<b>Site:</b>	2N-65W-21 ADAMSON 22-21HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	ADAMSON 13N-28HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	PLAN A		
<b>Design:</b>	PERMIT REV-1		

Planned Survey									
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,499.98	89.93	179.64	7,052.21	-749.52	-948.94	743.54	0.00	0.00	0.00
8,599.98	89.93	179.64	7,052.34	-849.51	-948.31	843.54	0.00	0.00	0.00
8,699.98	89.93	179.64	7,052.47	-949.51	-947.69	943.54	0.00	0.00	0.00
8,799.98	89.93	179.64	7,052.60	-1,049.51	-947.06	1,043.54	0.00	0.00	0.00
8,899.98	89.93	179.64	7,052.72	-1,149.51	-946.43	1,143.54	0.00	0.00	0.00
8,999.98	89.93	179.64	7,052.85	-1,249.50	-945.81	1,243.54	0.00	0.00	0.00
9,099.98	89.93	179.64	7,052.98	-1,349.50	-945.18	1,343.54	0.00	0.00	0.00
9,199.98	89.93	179.64	7,053.11	-1,449.50	-944.56	1,443.54	0.00	0.00	0.00
9,299.98	89.93	179.64	7,053.23	-1,549.50	-943.93	1,543.54	0.00	0.00	0.00
9,399.98	89.93	179.64	7,053.36	-1,649.50	-943.30	1,643.54	0.00	0.00	0.00
9,499.98	89.93	179.64	7,053.49	-1,749.49	-942.68	1,743.54	0.00	0.00	0.00
9,599.98	89.93	179.64	7,053.61	-1,849.49	-942.05	1,843.54	0.00	0.00	0.00
9,699.98	89.93	179.64	7,053.74	-1,949.49	-941.43	1,943.54	0.00	0.00	0.00
9,799.98	89.93	179.64	7,053.87	-2,049.49	-940.80	2,043.54	0.00	0.00	0.00
9,899.98	89.93	179.64	7,054.00	-2,149.48	-940.17	2,143.54	0.00	0.00	0.00
9,999.98	89.93	179.64	7,054.12	-2,249.48	-939.55	2,243.53	0.00	0.00	0.00
10,099.98	89.93	179.64	7,054.25	-2,349.48	-938.92	2,343.53	0.00	0.00	0.00
10,199.98	89.93	179.64	7,054.38	-2,449.48	-938.30	2,443.53	0.00	0.00	0.00
10,299.98	89.93	179.64	7,054.50	-2,549.48	-937.67	2,543.53	0.00	0.00	0.00
10,399.98	89.93	179.64	7,054.63	-2,649.47	-937.04	2,643.53	0.00	0.00	0.00
10,499.98	89.93	179.64	7,054.76	-2,749.47	-936.42	2,743.53	0.00	0.00	0.00
10,599.98	89.93	179.64	7,054.89	-2,849.47	-935.79	2,843.53	0.00	0.00	0.00
10,699.98	89.93	179.64	7,055.01	-2,949.47	-935.17	2,943.53	0.00	0.00	0.00
10,799.98	89.93	179.64	7,055.14	-3,049.46	-934.54	3,043.53	0.00	0.00	0.00
10,899.98	89.93	179.64	7,055.27	-3,149.46	-933.91	3,143.53	0.00	0.00	0.00
10,999.98	89.93	179.64	7,055.40	-3,249.46	-933.29	3,243.53	0.00	0.00	0.00
11,099.98	89.93	179.64	7,055.52	-3,349.46	-932.66	3,343.53	0.00	0.00	0.00
11,199.98	89.93	179.64	7,055.65	-3,449.46	-932.04	3,443.53	0.00	0.00	0.00
11,299.98	89.93	179.64	7,055.78	-3,549.45	-931.41	3,543.53	0.00	0.00	0.00
11,399.98	89.93	179.64	7,055.90	-3,649.45	-930.78	3,643.53	0.00	0.00	0.00
11,499.98	89.93	179.64	7,056.03	-3,749.45	-930.16	3,743.53	0.00	0.00	0.00
11,599.98	89.93	179.64	7,056.16	-3,849.45	-929.53	3,843.53	0.00	0.00	0.00
11,699.98	89.93	179.64	7,056.29	-3,949.44	-928.91	3,943.53	0.00	0.00	0.00
11,799.98	89.93	179.64	7,056.41	-4,049.44	-928.28	4,043.53	0.00	0.00	0.00
11,899.98	89.93	179.64	7,056.54	-4,149.44	-927.65	4,143.53	0.00	0.00	0.00
11,999.98	89.93	179.64	7,056.67	-4,249.44	-927.03	4,243.53	0.00	0.00	0.00
12,099.98	89.93	179.64	7,056.80	-4,349.44	-926.40	4,343.53	0.00	0.00	0.00
12,199.98	89.93	179.64	7,056.92	-4,449.43	-925.78	4,443.53	0.00	0.00	0.00
12,299.98	89.93	179.64	7,057.05	-4,549.43	-925.15	4,543.53	0.00	0.00	0.00
12,399.98	89.93	179.64	7,057.18	-4,649.43	-924.52	4,643.53	0.00	0.00	0.00
12,499.98	89.93	179.64	7,057.30	-4,749.43	-923.90	4,743.53	0.00	0.00	0.00
12,599.98	89.93	179.64	7,057.43	-4,849.42	-923.27	4,843.53	0.00	0.00	0.00
12,699.97	89.93	179.64	7,057.56	-4,949.42	-922.65	4,943.53	0.00	0.00	0.00
12,799.97	89.93	179.64	7,057.69	-5,049.42	-922.02	5,043.53	0.00	0.00	0.00
12,899.97	89.93	179.64	7,057.81	-5,149.42	-921.39	5,143.53	0.00	0.00	0.00
12,999.97	89.93	179.64	7,057.94	-5,249.42	-920.77	5,243.53	0.00	0.00	0.00
13,046.76	89.93	179.64	7,058.00	-5,296.20	-920.48	5,290.31	0.00	0.00	0.00
TD at 13046.76 - PBHL_ADAMSON 13N-28HZ(2380 FSL 266 FWL)									

<b>Database:</b>	Denver Sales	<b>Local Co-ordinate Reference:</b>	Well ADAMSON 13N-28HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	GL 4892 & KB 17 @ 4909.00usft (PERMIT)
<b>Project:</b>	WELD-NAD83-UTMFT13N	<b>MD Reference:</b>	GL 4892 & KB 17 @ 4909.00usft (PERMIT)
<b>Site:</b>	2N-65W-21 ADAMSON 22-21HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	ADAMSON 13N-28HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	PLAN A		
<b>Design:</b>	PERMIT REV-1		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
PBHL_ADAMSON 13N- - plan hits target center - Point	0.00	0.00	7,058.00	-5,296.20	-920.48	14,566,505.35	1,730,615.16	40.108771	-104.677409

Casing Points					
Measured Depth	Vertical Depth			Casing Diameter	Hole Diameter
(usft)	(usft)	Name		(in)	(in)
1,345.00	1,345.00	9 5/8"		9.625	13.500
7,543.59	7,051.00	TOP OF PRODUCTION(2591 FSL 249 FWL)		5.500	7.875

Formations						
Measured Depth	Vertical Depth				Dip	Dip Direction
(usft)	(usft)	Name	Lithology		(°)	(°)
1,295.00	1,295.00	Fox Hills Marker			0.00	
4,638.14	4,531.00	Sussex			0.00	
7,105.48	6,891.00	Sharon Springs			0.00	
7,204.24	6,953.00	Niobrara Top			0.00	
7,345.95	7,017.00	Niobrara B Bench			0.00	

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates			
(usft)	(usft)	+N/-S	+E/-W	Comment	
(usft)	(usft)	(usft)	(usft)		
1,445.00	1,445.00	0.00	0.00	Start Build 2.00	
2,262.60	2,251.55	73.09	-89.92	Start 3564.12 hold at 2262.60 MD	
5,826.72	5,671.49	705.99	-868.59	Start Drop -2.00	
6,644.32	6,478.04	779.08	-958.51	Start DLS 10.00 TFO 179.64	
7,543.59	7,051.00	206.86	-954.93	Start 5503.17 hold at 7543.59 MD	
13,046.76	7,058.00	-5,296.20	-920.48	TD at 13046.76	