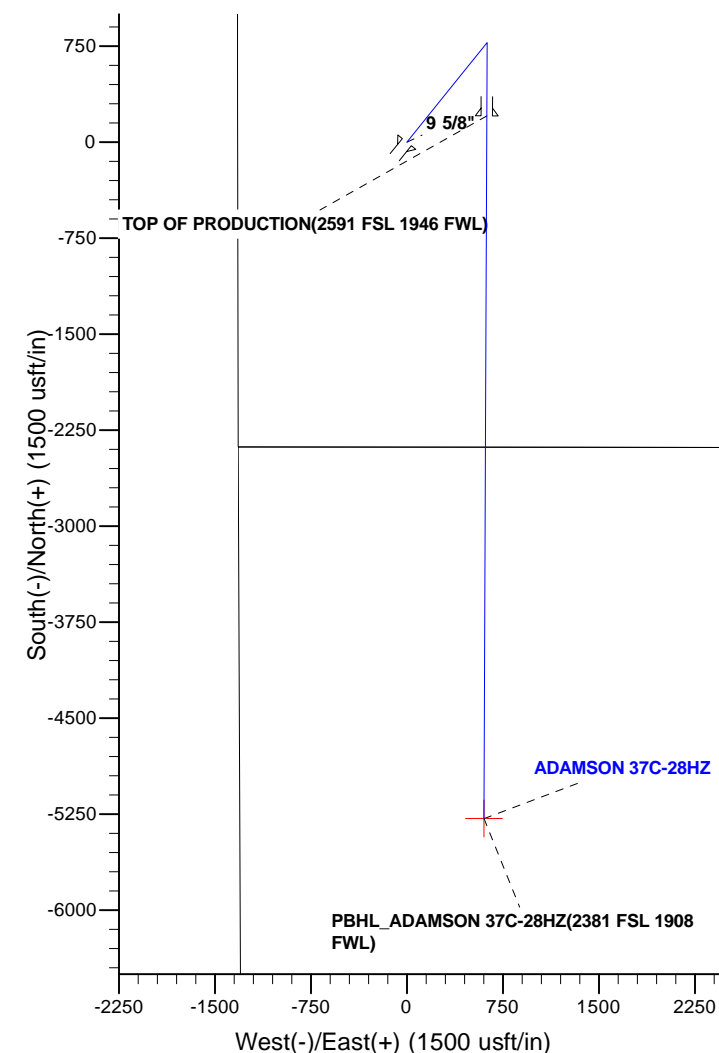
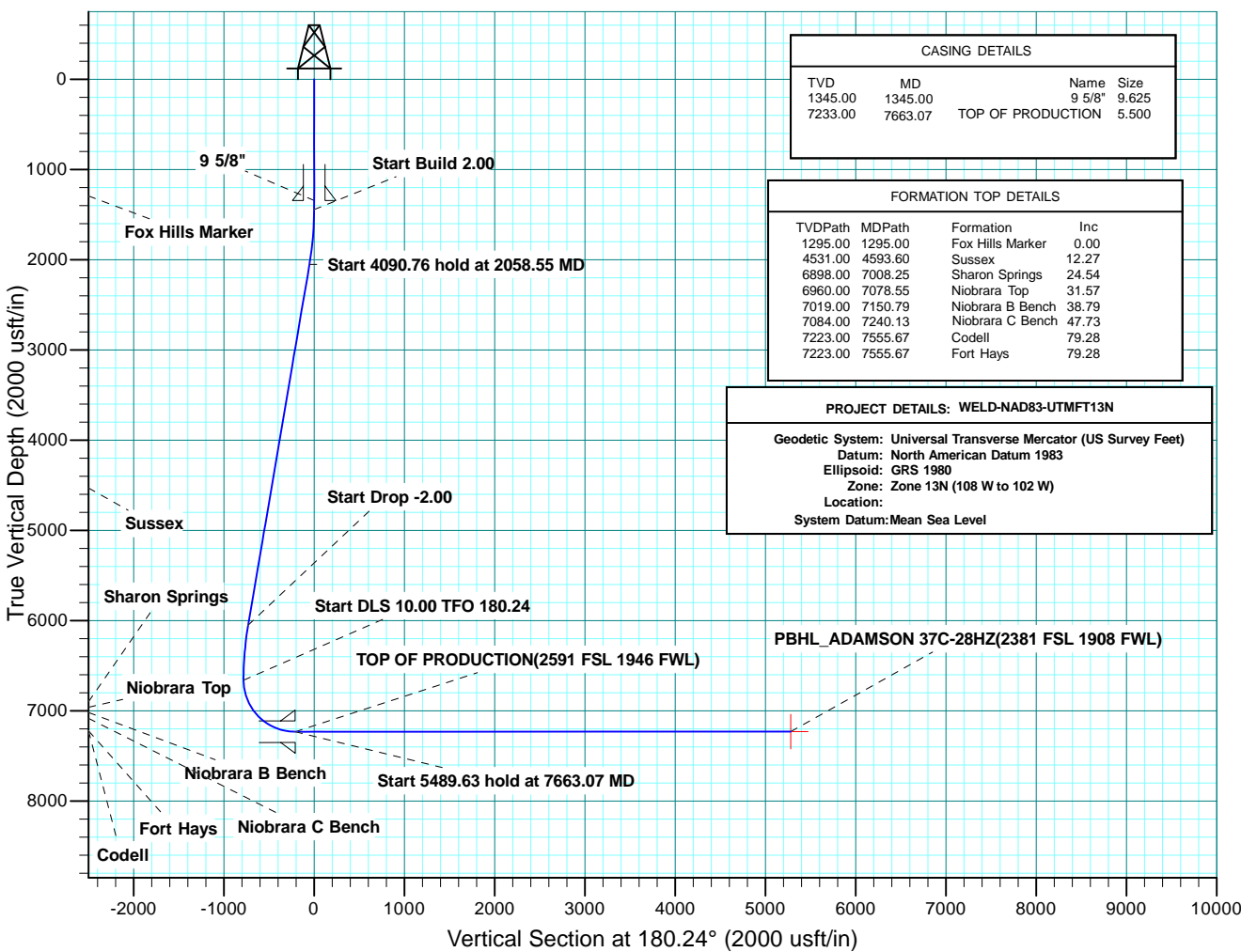


SHL: ADAMSON 37C-28HZ								
GL 4892 & KB 17 @ 4909.00usft (PERMIT)								
		+N-S 0.00	+E-W 0.00	Northing 14571804.23	Easting 1731636.14	Latitude 40.123312	Longitude -104.673688	
DESIGN TARGET DETAILS								
Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	7231.00	-5283.46	602.21	14566523.02	1732257.74	40.108803	-104.671534	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
2058.55	12.27	38.83	2053.87	50.99	41.04	2.00	38.83	-51.16
6149.31	12.27	38.83	6051.17	728.29	586.17	0.00	0.00	-730.74
6762.86	0.00	0.00	6660.04	779.28	627.21	2.00	180.00	-781.90
7663.07	90.02	180.24	7233.00	206.12	624.85	10.00	180.24	-208.73
13152.69	90.02	180.24	7231.00	-5283.46	602.21	0.00	0.00	5280.89
PBHL_ADAMSON 37C-28HZ(2381 FSL 1908 FWL)								



# **US ROCKIES WATTENBERG PLANNING**

**WELD-NAD83-UTMFT13N**

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

**ADAMSON 37C-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 37C-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 37C-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:	Lat/Long	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 37C-28HZ					
Well Position	+N/-S	-1.09 usft	Northing:	14,571,804.23 usft	Latitude:	40.123312
	+E/-W	119.93 usft	Easting:	1,731,636.14 usft	Longitude:	-104.673688
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	2/6/2015	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	180.24

<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	
2,058.55	12.27	38.83	2,053.87	50.99	41.04	2.00	2.00	0.00	38.83	
6,149.31	12.27	38.83	6,051.17	728.29	586.17	0.00	0.00	0.00	0.00	
6,762.86	0.00	0.00	6,660.04	779.28	627.21	2.00	-2.00	0.00	180.00	
7,663.07	90.02	180.24	7,233.00	206.12	624.85	10.00	10.00	-19.97	180.24	
13,152.69	90.02	180.24	7,231.00	-5,283.46	602.21	0.00	0.00	0.00	0.00	PBHL_ADAMSON 37

<b>Database:</b>	Denver Sales	<b>Local Co-ordinate Reference:</b>	Well ADAMSON 37C-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 37C-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	38.83	1,499.99	0.41	0.33	-0.41	2.00	2.00	0.00
1,600.00	3.10	38.83	1,599.92	3.27	2.63	-3.28	2.00	2.00	0.00
1,700.00	5.10	38.83	1,699.66	8.84	7.11	-8.86	2.00	2.00	0.00
1,800.00	7.10	38.83	1,799.09	17.11	13.77	-17.17	2.00	2.00	0.00
1,900.00	9.10	38.83	1,898.09	28.09	22.61	-28.18	2.00	2.00	0.00
2,000.00	11.10	38.83	1,996.53	41.75	33.60	-41.89	2.00	2.00	0.00
2,058.55	12.27	38.83	2,053.87	50.99	41.04	-51.16	2.00	2.00	0.00
<b>Start 4090.76 hold at 2058.55 MD</b>									
2,100.00	12.27	38.83	2,094.37	57.85	46.56	-58.04	0.00	0.00	0.00
2,200.00	12.27	38.83	2,192.08	74.41	59.89	-74.66	0.00	0.00	0.00
2,300.00	12.27	38.83	2,289.80	90.96	73.21	-91.27	0.00	0.00	0.00
2,400.00	12.27	38.83	2,387.51	107.52	86.54	-107.88	0.00	0.00	0.00
2,500.00	12.27	38.83	2,485.23	124.08	99.86	-124.49	0.00	0.00	0.00
2,599.99	12.27	38.83	2,582.94	140.63	113.19	-141.11	0.00	0.00	0.00
2,699.99	12.27	38.83	2,680.66	157.19	126.52	-157.72	0.00	0.00	0.00
2,799.99	12.27	38.83	2,778.38	173.75	139.84	-174.33	0.00	0.00	0.00
2,899.99	12.27	38.83	2,876.09	190.30	153.17	-190.94	0.00	0.00	0.00
2,999.99	12.27	38.83	2,973.81	206.86	166.49	-207.56	0.00	0.00	0.00
3,099.99	12.27	38.83	3,071.52	223.42	179.82	-224.17	0.00	0.00	0.00
3,199.99	12.27	38.83	3,169.24	239.98	193.15	-240.78	0.00	0.00	0.00
3,299.99	12.27	38.83	3,266.95	256.53	206.47	-257.39	0.00	0.00	0.00
3,399.99	12.27	38.83	3,364.67	273.09	219.80	-274.01	0.00	0.00	0.00
3,499.99	12.27	38.83	3,462.38	289.65	233.12	-290.62	0.00	0.00	0.00
3,599.99	12.27	38.83	3,560.10	306.20	246.45	-307.23	0.00	0.00	0.00
3,699.99	12.27	38.83	3,657.81	322.76	259.78	-323.85	0.00	0.00	0.00
3,799.99	12.27	38.83	3,755.53	339.32	273.10	-340.46	0.00	0.00	0.00
3,899.99	12.27	38.83	3,853.24	355.87	286.43	-357.07	0.00	0.00	0.00
3,999.99	12.27	38.83	3,950.96	372.43	299.75	-373.68	0.00	0.00	0.00
4,099.99	12.27	38.83	4,048.67	388.99	313.08	-390.30	0.00	0.00	0.00
4,199.99	12.27	38.83	4,146.39	405.54	326.41	-406.91	0.00	0.00	0.00
4,299.99	12.27	38.83	4,244.10	422.10	339.73	-423.52	0.00	0.00	0.00
4,399.99	12.27	38.83	4,341.82	438.66	353.06	-440.13	0.00	0.00	0.00
4,499.99	12.27	38.83	4,439.53	455.21	366.38	-456.75	0.00	0.00	0.00

<b>Database:</b>	Denver Sales	<b>Local Co-ordinate Reference:</b>	Well ADAMSON 37C-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 37C-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)
4,593.60	12.27	38.83	4,531.00	470.71	378.86	-472.30	0.00	0.00	0.00
<b>Sussex</b>									
4,599.99	12.27	38.83	4,537.25	471.77	379.71	-473.36	0.00	0.00	0.00
4,699.99	12.27	38.83	4,634.96	488.33	393.04	-489.97	0.00	0.00	0.00
4,799.99	12.27	38.83	4,732.68	504.89	406.36	-506.58	0.00	0.00	0.00
4,899.99	12.27	38.83	4,830.39	521.44	419.69	-523.20	0.00	0.00	0.00
4,999.99	12.27	38.83	4,928.11	538.00	433.01	-539.81	0.00	0.00	0.00
5,099.99	12.27	38.83	5,025.82	554.56	446.34	-556.42	0.00	0.00	0.00
5,199.99	12.27	38.83	5,123.54	571.11	459.67	-573.03	0.00	0.00	0.00
5,299.99	12.27	38.83	5,221.25	587.67	472.99	-589.65	0.00	0.00	0.00
5,399.99	12.27	38.83	5,318.97	604.23	486.32	-606.26	0.00	0.00	0.00
5,499.99	12.27	38.83	5,416.68	620.78	499.64	-622.87	0.00	0.00	0.00
5,599.99	12.27	38.83	5,514.40	637.34	512.97	-639.48	0.00	0.00	0.00
5,699.99	12.27	38.83	5,612.11	653.90	526.30	-656.10	0.00	0.00	0.00
5,799.99	12.27	38.83	5,709.83	670.45	539.62	-672.71	0.00	0.00	0.00
5,899.99	12.27	38.83	5,807.54	687.01	552.95	-689.32	0.00	0.00	0.00
5,999.99	12.27	38.83	5,905.26	703.57	566.27	-705.93	0.00	0.00	0.00
6,099.99	12.27	38.83	6,002.97	720.12	579.60	-722.55	0.00	0.00	0.00
6,149.31	12.27	38.83	6,051.17	728.29	586.17	-730.74	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
6,199.99	11.26	38.83	6,100.78	736.34	592.65	-738.82	2.00	-2.00	0.00
6,299.99	9.26	38.83	6,199.18	750.21	603.82	-752.73	2.00	-2.00	0.00
6,399.99	7.26	38.83	6,298.14	761.40	612.82	-763.96	2.00	-2.00	0.00
6,499.99	5.26	38.83	6,397.54	769.89	619.65	-772.48	2.00	-2.00	0.00
6,599.99	3.26	38.83	6,497.26	775.67	624.31	-778.28	2.00	-2.00	0.00
6,699.99	1.26	38.83	6,597.17	778.74	626.78	-781.36	2.00	-2.00	0.00
6,762.86	0.00	0.00	6,660.04	779.28	627.21	-781.90	2.00	-2.00	0.00
<b>Start DLS 10.00 TFO 180.24</b>									
6,799.99	3.71	180.24	6,697.14	778.08	627.21	-780.70	10.00	10.00	0.00
6,899.99	13.71	180.24	6,795.86	762.95	627.14	-765.57	10.00	10.00	0.00
6,999.99	23.71	180.24	6,890.46	730.91	627.01	-733.53	10.00	10.00	0.00
7,008.25	24.54	180.24	6,898.00	727.53	627.00	-730.15	10.00	10.00	0.00
<b>Sharon Springs</b>									
7,078.55	31.57	180.24	6,960.00	694.49	626.86	-697.11	10.00	10.00	0.00
<b>Niobrara Top</b>									
7,099.99	33.71	180.24	6,978.05	682.93	626.81	-685.55	10.00	10.00	0.00
7,150.79	38.79	180.24	7,019.00	652.90	626.69	-655.52	10.00	10.00	0.00
<b>Niobrara B Bench</b>									
7,199.99	43.71	180.24	7,055.98	620.46	626.56	-623.08	10.00	10.00	0.00
7,240.13	47.73	180.24	7,084.00	591.73	626.44	-594.35	10.00	10.00	0.00
<b>Niobrara C Bench</b>									
7,299.99	53.71	180.24	7,121.88	545.42	626.25	-548.04	10.00	10.00	0.00
7,399.99	63.71	180.24	7,173.74	460.07	625.89	-462.69	10.00	10.00	0.00
7,499.99	73.71	180.24	7,210.00	367.01	625.51	-369.63	10.00	10.00	0.00
7,555.67	79.28	180.24	7,223.00	312.89	625.29	-315.51	10.00	10.00	0.00
<b>Fort Hays - Codell</b>									
7,599.98	83.71	180.24	7,229.55	269.07	625.11	-271.69	10.00	10.00	0.00
7,663.07	90.02	180.24	7,233.00	206.12	624.85	-208.73	10.00	10.00	0.00
<b>Start 5489.63 hold at 7663.07 MD - TOP OF PRODUCTION(2591 FSL 1946 FWL)</b>									
7,699.98	90.02	180.24	7,232.98	169.20	624.69	-171.82	0.00	0.00	0.00
7,799.98	90.02	180.24	7,232.95	69.20	624.28	-71.82	0.00	0.00	0.00
7,899.98	90.02	180.24	7,232.91	-30.80	623.87	28.18	0.00	0.00	0.00
7,999.98	90.02	180.24	7,232.88	-130.80	623.46	128.18	0.00	0.00	0.00

<b>Database:</b>	Denver Sales	<b>Local Co-ordinate Reference:</b>	Well ADAMSON 37C-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 37C-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)
8,099.98	90.02	180.24	7,232.84	-230.79	623.04	228.18	0.00	0.00	0.00
8,199.98	90.02	180.24	7,232.80	-330.79	622.63	328.18	0.00	0.00	0.00
8,299.98	90.02	180.24	7,232.77	-430.79	622.22	428.18	0.00	0.00	0.00
8,399.98	90.02	180.24	7,232.73	-530.79	621.81	528.18	0.00	0.00	0.00
8,499.98	90.02	180.24	7,232.69	-630.79	621.40	628.18	0.00	0.00	0.00
8,599.98	90.02	180.24	7,232.66	-730.79	620.98	728.18	0.00	0.00	0.00
8,699.98	90.02	180.24	7,232.62	-830.79	620.57	828.18	0.00	0.00	0.00
8,799.98	90.02	180.24	7,232.58	-930.79	620.16	928.18	0.00	0.00	0.00
8,899.98	90.02	180.24	7,232.55	-1,030.79	619.75	1,028.18	0.00	0.00	0.00
8,999.98	90.02	180.24	7,232.51	-1,130.79	619.33	1,128.18	0.00	0.00	0.00
9,099.98	90.02	180.24	7,232.48	-1,230.78	618.92	1,228.18	0.00	0.00	0.00
9,199.98	90.02	180.24	7,232.44	-1,330.78	618.51	1,328.18	0.00	0.00	0.00
9,299.98	90.02	180.24	7,232.40	-1,430.78	618.10	1,428.18	0.00	0.00	0.00
9,399.98	90.02	180.24	7,232.37	-1,530.78	617.68	1,528.18	0.00	0.00	0.00
9,499.98	90.02	180.24	7,232.33	-1,630.78	617.27	1,628.18	0.00	0.00	0.00
9,599.98	90.02	180.24	7,232.29	-1,730.78	616.86	1,728.18	0.00	0.00	0.00
9,699.98	90.02	180.24	7,232.26	-1,830.78	616.45	1,828.18	0.00	0.00	0.00
9,799.98	90.02	180.24	7,232.22	-1,930.78	616.03	1,928.18	0.00	0.00	0.00
9,899.98	90.02	180.24	7,232.18	-2,030.78	615.62	2,028.18	0.00	0.00	0.00
9,999.98	90.02	180.24	7,232.15	-2,130.77	615.21	2,128.18	0.00	0.00	0.00
10,099.98	90.02	180.24	7,232.11	-2,230.77	614.80	2,228.18	0.00	0.00	0.00
10,199.98	90.02	180.24	7,232.07	-2,330.77	614.39	2,328.18	0.00	0.00	0.00
10,299.98	90.02	180.24	7,232.04	-2,430.77	613.97	2,428.18	0.00	0.00	0.00
10,399.98	90.02	180.24	7,232.00	-2,530.77	613.56	2,528.18	0.00	0.00	0.00
10,499.98	90.02	180.24	7,231.97	-2,630.77	613.15	2,628.18	0.00	0.00	0.00
10,599.98	90.02	180.24	7,231.93	-2,730.77	612.74	2,728.18	0.00	0.00	0.00
10,699.98	90.02	180.24	7,231.89	-2,830.77	612.32	2,828.18	0.00	0.00	0.00
10,799.98	90.02	180.24	7,231.86	-2,930.77	611.91	2,928.18	0.00	0.00	0.00
10,899.98	90.02	180.24	7,231.82	-3,030.77	611.50	3,028.18	0.00	0.00	0.00
10,999.98	90.02	180.24	7,231.78	-3,130.76	611.09	3,128.18	0.00	0.00	0.00
11,099.98	90.02	180.24	7,231.75	-3,230.76	610.67	3,228.18	0.00	0.00	0.00
11,199.98	90.02	180.24	7,231.71	-3,330.76	610.26	3,328.18	0.00	0.00	0.00
11,299.98	90.02	180.24	7,231.67	-3,430.76	609.85	3,428.18	0.00	0.00	0.00
11,399.98	90.02	180.24	7,231.64	-3,530.76	609.44	3,528.18	0.00	0.00	0.00
11,499.98	90.02	180.24	7,231.60	-3,630.76	609.03	3,628.18	0.00	0.00	0.00
11,599.98	90.02	180.24	7,231.57	-3,730.76	608.61	3,728.18	0.00	0.00	0.00
11,699.98	90.02	180.24	7,231.53	-3,830.76	608.20	3,828.18	0.00	0.00	0.00
11,799.98	90.02	180.24	7,231.49	-3,930.76	607.79	3,928.18	0.00	0.00	0.00
11,899.98	90.02	180.24	7,231.46	-4,030.75	607.38	4,028.18	0.00	0.00	0.00
11,999.98	90.02	180.24	7,231.42	-4,130.75	606.96	4,128.18	0.00	0.00	0.00
12,099.98	90.02	180.24	7,231.38	-4,230.75	606.55	4,228.17	0.00	0.00	0.00
12,199.98	90.02	180.24	7,231.35	-4,330.75	606.14	4,328.17	0.00	0.00	0.00
12,299.98	90.02	180.24	7,231.31	-4,430.75	605.73	4,428.17	0.00	0.00	0.00
12,399.98	90.02	180.24	7,231.27	-4,530.75	605.31	4,528.17	0.00	0.00	0.00
12,499.98	90.02	180.24	7,231.24	-4,630.75	604.90	4,628.17	0.00	0.00	0.00
12,599.98	90.02	180.24	7,231.20	-4,730.75	604.49	4,728.17	0.00	0.00	0.00
12,699.97	90.02	180.24	7,231.16	-4,830.75	604.08	4,828.17	0.00	0.00	0.00
12,799.97	90.02	180.24	7,231.13	-4,930.75	603.66	4,928.17	0.00	0.00	0.00
12,899.97	90.02	180.24	7,231.09	-5,030.74	603.25	5,028.17	0.00	0.00	0.00
12,999.97	90.02	180.24	7,231.06	-5,130.74	602.84	5,128.17	0.00	0.00	0.00
13,099.97	90.02	180.24	7,231.02	-5,230.74	602.43	5,228.17	0.00	0.00	0.00
13,152.69	90.02	180.24	7,231.00	-5,283.46	602.21	5,280.89	0.00	0.00	0.00
TD at 13152.69 - PBHL_ADAMSON 37C-28HZ(2380 FSL 1908 FWL)									

<b>Database:</b>	Denver Sales	<b>Local Co-ordinate Reference:</b>	Well ADAMSON 37C-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 37C-28HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	PLAN A		
<b>Design:</b>	PERMIT REV-1		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
- Shape									
PBHL_ADAMSON 37C- - plan hits target center - Point	0.00	0.00	7,231.00	-5,283.46	602.21	14,566,523.01	1,732,257.74	40.108803	-104.671534

Casing Points					
Measured Depth	Vertical Depth	Name	Casing Diameter	Hole Diameter	
(usft)	(usft)		(in)	(in)	
1,345.00	1,345.00	9 5/8"	9.625	13.500	
7,663.07	7,233.00	TOP OF PRODUCTION(2591 FSL 1946 FWL)	5.500	7.875	

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(usft)	(usft)			(°)	(°)	
1,295.00	1,295.00	Fox Hills Marker		0.00		
4,593.60	4,531.00	Sussex				
7,008.25	6,898.00	Sharon Springs		0.00		
7,078.55	6,960.00	Niobrara Top		0.00		
7,150.79	7,019.00	Niobrara B Bench		0.00		
7,240.13	7,084.00	Niobrara C Bench		0.00		
7,555.67	7,223.00	Fort Hays		0.00		
7,555.67	7,223.00	Codell		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	
2,058.55	2,053.87	50.99	41.04	Start 4090.76 hold at 2058.55 MD	
6,149.31	6,051.17	728.29	586.17	Start Drop -2.00	
6,762.86	6,660.04	779.28	627.21	Start DLS 10.00 TFO 180.24	
7,663.07	7,233.00	206.12	624.85	Start 5489.63 hold at 7663.07 MD	
13,152.69	7,231.00	-5,283.46	602.21	TD at 13152.69	