

# **US ROCKIES WATTENBERG PLANNING**

**LARIMER-NAD83-UTMFT13N**

**5N-68W-25 JODSTER NORTH 8-25HZ PAD**

**JODSTER NORTH 25-12HZ**

**Plan A**

**Plan: Permit Rev-1**

SHL Lat/Long: 40.373431/-104.949096

Survey Program: MWD+IFR+MSA

## **Standard Planning Report**

**10 September, 2018**

Project: LARIMER-NAD83-UTMFT13N  
Site: 5N-68W-25 JODSTER NORTH 8-25HZ PAD  
Well: JODSTER NORTH 25-12HZ  
Wellbore: Plan A  
Design: Permit Rev-1

## US ROCKIES WATTENBERG PLANNING

### CASING DETAILS

TVD	MD	Size
1500.00	1518.84	9-5/8
6766.00	7278.52	5-1/2

WELL DETAILS: JODSTER NORTH 25-12HZ

GL = 4861.00  
RKB = 17' @ 4878.00usft (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	270.00	0.00	0.00	270.00	0.00	0.00	0.00	0.00	0.00	
3	1214.00	14.16	150.60	1204.42	-101.11	56.97	1.50	150.60	56.97	
4	4014.00	14.16	150.60	3919.35	-697.86	393.22	0.00	0.00	393.22	
5	4722.00	0.00	0.00	4620.16	-773.69	435.95	2.00	-180.00	435.95	
6	6151.64	0.00	0.00	6049.80	-773.69	435.95	0.00	0.00	435.95	
7	7278.52	90.15	90.00	6766.00	-773.64	1154.04	8.00	90.00	1154.04	
8	17537.66	90.15	90.00	6739.00	-772.84	11413.14	0.00	0.00	11413.14	JODSTER NORTH 25-12HZ_BHL

### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
JODSTER NORTH 25-12HZ_SHL	0.00	0.00	0.00	40.373431	-104.949096
JODSTER NORTH 25-12HZ_BHL	6739.00	-772.84	11413.14	40.371302	-104.908119

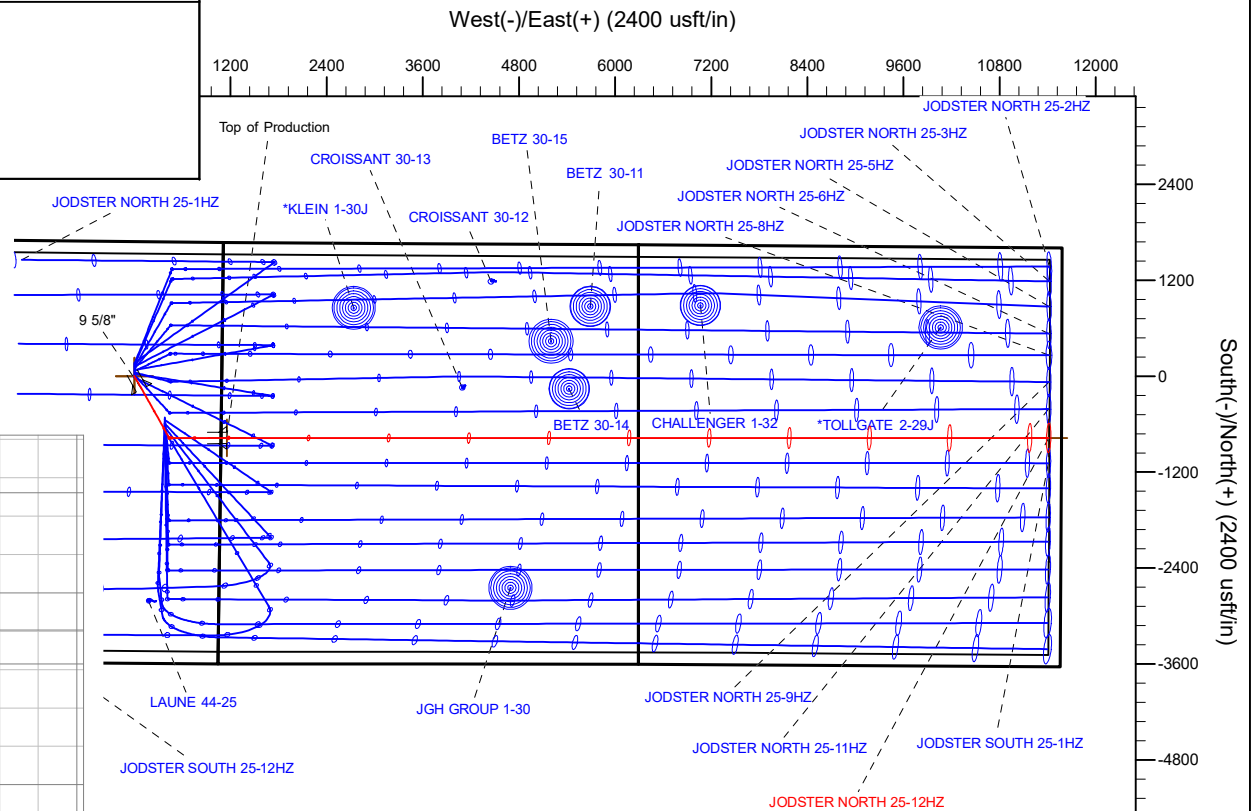
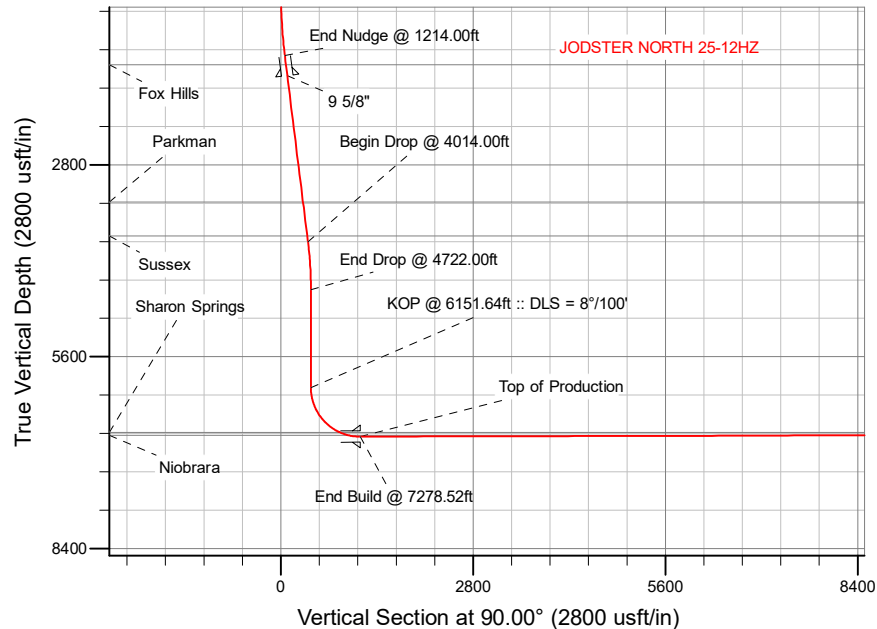
**SHL**  
**1683' FNL**  
**1091' FEL**

**HEEL**  
**2444' FNL**  
**75' FWL**

**TOE**  
**2378' FNL**  
**160' FEL**

### FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1340.00	1353.83	Fox Hills
3342.00	3418.56	Parkman
3837.00	3929.07	Sussex
6705.00	6978.91	Sharon Springs
6748.00	7115.74	Niobrara



Plan: Permit Rev-1 (JODSTER NORTH 25-12HZ/Plan A)

Date: 9/10/2018

## Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well JODSTER NORTH 25-12HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4878.00usft (Drilling Rig)
<b>Project:</b>	LARIMER-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4878.00usft (Drilling Rig)
<b>Site:</b>	5N-68W-25 JODSTER NORTH 8-25HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	JODSTER NORTH 25-12HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-1		

<b>Project</b>	LARIMER-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		5N-68W-25 JODSTER NORTH 8-25HZ PAD			
Site Position:		Northing:	14,662,888.23 usft	Latitude:	40.373884
From:	Lat/Long	Easting:	1,654,595.99 usft	Longitude:	-104.949090
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.03 °

Well		JODSTER NORTH 25-12HZ				
Well Position	+N/-S	-164.97 usft	Northing:	14,662,723.27 usft	Latitude:	40.373431
	+E/-W	-1.67 usft	Easting:	1,654,594.42 usft	Longitude:	-104.949096
Position Uncertainty	3.28 usft		Wellhead Elevation:		Ground Level:	4,861.00 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	9/5/2018	8.18	66.77	52,219.75832986

<b>Design</b>	Permit Rev-1			
<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	90.00

<b>Plan Survey Tool Program</b>		<b>Date</b>	9/10/2018		
<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-1 (Plan A)	APC_ISCWSA REV 2 MWD+II Fixed:v2:crustal field declinatio	
2	1,500.00	17,537.66	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 JODSTER NORTH 25-12HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4878.00usft (Drilling Rig)
Project:	LARIMER-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4878.00usft (Drilling Rig)
Site:	5N-68W-25 JODSTER NORTH 8-25HZ PAD	North Reference:	True
Well:	JODSTER NORTH 25-12HZ	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	
270.00	0.00	0.00	270.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,214.00	14.16	150.60	1,204.42	-101.11	56.97	1.50	1.50	0.00	150.60	
4,014.00	14.16	150.60	3,919.35	-697.86	393.22	0.00	0.00	0.00	0.00	
4,722.00	0.00	0.00	4,620.16	-773.69	435.95	2.00	-2.00	-21.27	-180.00	
6,151.64	0.00	0.00	6,049.80	-773.69	435.95	0.00	0.00	0.00	0.00	
7,278.52	90.15	90.00	6,766.00	-773.64	1,154.04	8.00	8.00	7.99	90.00	
17,537.66	90.15	90.00	6,739.00	-772.84	11,413.14	0.00	0.00	0.00	0.00	JODSTER NORTH 25-

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well JODSTER NORTH 25-12HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4878.00usft (Drilling Rig)
<b>Project:</b>	LARIMER-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4878.00usft (Drilling Rig)
<b>Site:</b>	5N-68W-25 JODSTER NORTH 8-25HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	JODSTER NORTH 25-12HZ	<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
270.00	0.00	0.00	270.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 270.00ft									
300.00	0.45	150.60	300.00	-0.10	0.06	0.06	1.50	1.50	0.00
400.00	1.95	150.60	399.97	-1.93	1.09	1.09	1.50	1.50	0.00
500.00	3.45	150.60	499.86	-6.03	3.40	3.40	1.50	1.50	0.00
600.00	4.95	150.60	599.59	-12.41	6.99	6.99	1.50	1.50	0.00
700.00	6.45	150.60	699.09	-21.06	11.87	11.87	1.50	1.50	0.00
800.00	7.95	150.60	798.30	-31.98	18.02	18.02	1.50	1.50	0.00
900.00	9.45	150.60	897.15	-45.16	25.45	25.45	1.50	1.50	0.00
1,000.00	10.95	150.60	995.56	-60.59	34.14	34.14	1.50	1.50	0.00
1,100.00	12.45	150.60	1,093.48	-78.25	44.09	44.09	1.50	1.50	0.00
1,200.00	13.95	150.60	1,190.84	-98.15	55.30	55.30	1.50	1.50	0.00
1,214.00	14.16	150.60	1,204.42	-101.11	56.97	56.97	1.50	1.50	0.00
End Nudge @ 1214.00ft									
1,300.00	14.16	150.60	1,287.81	-119.44	67.30	67.30	0.00	0.00	0.00
1,353.83	14.16	150.60	1,340.00	-130.91	73.76	73.76	0.00	0.00	0.00
Fox Hills									
1,400.00	14.16	150.60	1,384.77	-140.75	79.31	79.31	0.00	0.00	0.00
1,500.00	14.16	150.60	1,481.73	-162.06	91.32	91.32	0.00	0.00	0.00
1,518.84	14.16	150.60	1,500.00	-166.08	93.58	93.58	0.00	0.00	0.00
9 5/8"									
1,600.00	14.16	150.60	1,578.69	-183.38	103.33	103.33	0.00	0.00	0.00
1,700.00	14.16	150.60	1,675.65	-204.69	115.34	115.34	0.00	0.00	0.00
1,800.00	14.16	150.60	1,772.62	-226.00	127.35	127.35	0.00	0.00	0.00
1,900.00	14.16	150.60	1,869.58	-247.31	139.35	139.35	0.00	0.00	0.00
2,000.00	14.16	150.60	1,966.54	-268.63	151.36	151.36	0.00	0.00	0.00
2,100.00	14.16	150.60	2,063.50	-289.94	163.37	163.37	0.00	0.00	0.00
2,200.00	14.16	150.60	2,160.46	-311.25	175.38	175.38	0.00	0.00	0.00
2,300.00	14.16	150.60	2,257.42	-332.56	187.39	187.39	0.00	0.00	0.00
2,400.00	14.16	150.60	2,354.38	-353.88	199.40	199.40	0.00	0.00	0.00
2,500.00	14.16	150.60	2,451.35	-375.19	211.41	211.41	0.00	0.00	0.00
2,600.00	14.16	150.60	2,548.31	-396.50	223.42	223.42	0.00	0.00	0.00
2,700.00	14.16	150.60	2,645.27	-417.81	235.43	235.43	0.00	0.00	0.00
2,800.00	14.16	150.60	2,742.23	-439.13	247.44	247.44	0.00	0.00	0.00
2,900.00	14.16	150.60	2,839.19	-460.44	259.44	259.44	0.00	0.00	0.00
3,000.00	14.16	150.60	2,936.15	-481.75	271.45	271.45	0.00	0.00	0.00
3,100.00	14.16	150.60	3,033.12	-503.07	283.46	283.46	0.00	0.00	0.00
3,200.00	14.16	150.60	3,130.08	-524.38	295.47	295.47	0.00	0.00	0.00
3,300.00	14.16	150.60	3,227.04	-545.69	307.48	307.48	0.00	0.00	0.00
3,400.00	14.16	150.60	3,324.00	-567.00	319.49	319.49	0.00	0.00	0.00
3,418.56	14.16	150.60	3,342.00	-570.96	321.72	321.72	0.00	0.00	0.00
Parkman									
3,500.00	14.16	150.60	3,420.96	-588.32	331.50	331.50	0.00	0.00	0.00
3,600.00	14.16	150.60	3,517.92	-609.63	343.51	343.51	0.00	0.00	0.00
3,700.00	14.16	150.60	3,614.89	-630.94	355.52	355.52	0.00	0.00	0.00
3,800.00	14.16	150.60	3,711.85	-652.25	367.53	367.53	0.00	0.00	0.00
3,900.00	14.16	150.60	3,808.81	-673.57	379.53	379.53	0.00	0.00	0.00
3,929.07	14.16	150.60	3,837.00	-679.76	383.03	383.03	0.00	0.00	0.00
Sussex									
4,000.00	14.16	150.60	3,905.77	-694.88	391.54	391.54	0.00	0.00	0.00

**Corporate**  
**Planning Report**

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well JODSTER NORTH 25-12HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4878.00usft (Drilling Rig)
<b>Project:</b>	LARIMER-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4878.00usft (Drilling Rig)
<b>Site:</b>	5N-68W-25 JODSTER NORTH 8-25HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	JODSTER NORTH 25-12HZ	<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)
4,014.00	14.16	150.60	3,919.35	-697.86	393.22	393.22	0.00	0.00	0.00
<b>Begin Drop @ 4014.00ft</b>									
4,100.00	12.44	150.60	4,003.04	-715.10	402.94	402.94	2.00	-2.00	0.00
4,200.00	10.44	150.60	4,101.04	-732.38	412.67	412.67	2.00	-2.00	0.00
4,300.00	8.44	150.60	4,199.69	-746.66	420.72	420.72	2.00	-2.00	0.00
4,400.00	6.44	150.60	4,298.84	-757.95	427.08	427.08	2.00	-2.00	0.00
4,500.00	4.44	150.60	4,398.38	-766.20	431.73	431.73	2.00	-2.00	0.00
4,600.00	2.44	150.60	4,498.20	-771.43	434.68	434.68	2.00	-2.00	0.00
4,700.00	0.44	150.60	4,598.16	-773.62	435.91	435.91	2.00	-2.00	0.00
4,722.00	0.00	0.00	4,620.16	-773.69	435.95	435.95	2.00	-2.00	-684.54
<b>End Drop @ 4722.00ft</b>									
4,800.00	0.00	0.00	4,698.16	-773.69	435.95	435.95	0.00	0.00	0.00
4,900.00	0.00	0.00	4,798.16	-773.69	435.95	435.95	0.00	0.00	0.00
5,000.00	0.00	0.00	4,898.16	-773.69	435.95	435.95	0.00	0.00	0.00
5,100.00	0.00	0.00	4,998.16	-773.69	435.95	435.95	0.00	0.00	0.00
5,200.00	0.00	0.00	5,098.16	-773.69	435.95	435.95	0.00	0.00	0.00
5,300.00	0.00	0.00	5,198.16	-773.69	435.95	435.95	0.00	0.00	0.00
5,400.00	0.00	0.00	5,298.16	-773.69	435.95	435.95	0.00	0.00	0.00
5,500.00	0.00	0.00	5,398.16	-773.69	435.95	435.95	0.00	0.00	0.00
5,600.00	0.00	0.00	5,498.16	-773.69	435.95	435.95	0.00	0.00	0.00
5,700.00	0.00	0.00	5,598.16	-773.69	435.95	435.95	0.00	0.00	0.00
5,800.00	0.00	0.00	5,698.16	-773.69	435.95	435.95	0.00	0.00	0.00
5,900.00	0.00	0.00	5,798.16	-773.69	435.95	435.95	0.00	0.00	0.00
6,000.00	0.00	0.00	5,898.16	-773.69	435.95	435.95	0.00	0.00	0.00
6,100.00	0.00	0.00	5,998.16	-773.69	435.95	435.95	0.00	0.00	0.00
6,151.64	0.00	0.00	6,049.80	-773.69	435.95	435.95	0.00	0.00	0.00
<b>KOP @ 6151.64ft :: DLS = 8°/100'</b>									
6,200.00	3.87	90.00	6,098.12	-773.69	437.59	437.59	8.00	8.00	186.09
6,300.00	11.87	90.00	6,197.10	-773.69	451.27	451.27	8.00	8.00	0.00
6,400.00	19.87	90.00	6,293.21	-773.69	478.59	478.59	8.00	8.00	0.00
6,500.00	27.87	90.00	6,384.59	-773.69	519.02	519.02	8.00	8.00	0.00
6,600.00	35.87	90.00	6,469.44	-773.68	571.77	571.77	8.00	8.00	0.00
6,700.00	43.87	90.00	6,546.13	-773.68	635.82	635.82	8.00	8.00	0.00
6,800.00	51.87	90.00	6,613.16	-773.67	709.93	709.93	8.00	8.00	0.00
6,900.00	59.87	90.00	6,669.22	-773.67	792.63	792.63	8.00	8.00	0.00
6,978.91	66.18	90.00	6,705.00	-773.66	862.93	862.93	8.00	8.00	0.00
<b>Sharon Springs</b>									
7,000.00	67.87	90.00	6,713.23	-773.66	882.34	882.34	8.00	8.00	0.00
7,100.00	75.87	90.00	6,744.33	-773.65	977.30	977.30	8.00	8.00	0.00
7,115.74	77.13	90.00	6,748.00	-773.65	992.60	992.60	8.00	8.00	0.00
<b>Niobrara</b>									
7,200.00	83.87	90.00	6,761.90	-773.64	1,075.66	1,075.66	8.00	8.00	0.00
7,278.52	90.15	90.00	6,766.00	-773.64	1,154.03	1,154.03	8.00	8.00	0.00
<b>End Build @ 7278.52ft - Top of Production</b>									
7,300.00	90.15	90.00	6,765.94	-773.64	1,175.51	1,175.51	0.00	0.00	0.00
7,400.00	90.15	90.00	6,765.68	-773.63	1,275.51	1,275.51	0.00	0.00	0.00
7,500.00	90.15	90.00	6,765.41	-773.62	1,375.51	1,375.51	0.00	0.00	0.00
7,600.00	90.15	90.00	6,765.15	-773.61	1,475.51	1,475.51	0.00	0.00	0.00
7,700.00	90.15	90.00	6,764.89	-773.61	1,575.51	1,575.51	0.00	0.00	0.00
7,800.00	90.15	90.00	6,764.62	-773.60	1,675.51	1,675.51	0.00	0.00	0.00
7,900.00	90.15	90.00	6,764.36	-773.59	1,775.51	1,775.51	0.00	0.00	0.00
8,000.00	90.15	90.00	6,764.10	-773.58	1,875.51	1,875.51	0.00	0.00	0.00
8,100.00	90.15	90.00	6,763.83	-773.57	1,975.51	1,975.51	0.00	0.00	0.00

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well JODSTER NORTH 25-12HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4878.00usft (Drilling Rig)
<b>Project:</b>	LARIMER-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4878.00usft (Drilling Rig)
<b>Site:</b>	5N-68W-25 JODSTER NORTH 8-25HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	JODSTER NORTH 25-12HZ	<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)	
8,200.00	90.15	90.00	6,763.57	-773.57	2,075.51	2,075.51	0.00	0.00	0.00	
8,300.00	90.15	90.00	6,763.31	-773.56	2,175.51	2,175.51	0.00	0.00	0.00	
8,400.00	90.15	90.00	6,763.04	-773.55	2,275.51	2,275.51	0.00	0.00	0.00	
8,500.00	90.15	90.00	6,762.78	-773.54	2,375.51	2,375.51	0.00	0.00	0.00	
8,600.00	90.15	90.00	6,762.52	-773.54	2,475.51	2,475.51	0.00	0.00	0.00	
8,700.00	90.15	90.00	6,762.25	-773.53	2,575.51	2,575.51	0.00	0.00	0.00	
8,800.00	90.15	90.00	6,761.99	-773.52	2,675.51	2,675.51	0.00	0.00	0.00	
8,900.00	90.15	90.00	6,761.73	-773.51	2,775.51	2,775.51	0.00	0.00	0.00	
9,000.00	90.15	90.00	6,761.47	-773.50	2,875.51	2,875.51	0.00	0.00	0.00	
9,100.00	90.15	90.00	6,761.20	-773.50	2,975.51	2,975.51	0.00	0.00	0.00	
9,200.00	90.15	90.00	6,760.94	-773.49	3,075.51	3,075.51	0.00	0.00	0.00	
9,300.00	90.15	90.00	6,760.68	-773.48	3,175.50	3,175.50	0.00	0.00	0.00	
9,400.00	90.15	90.00	6,760.41	-773.47	3,275.50	3,275.50	0.00	0.00	0.00	
9,500.00	90.15	90.00	6,760.15	-773.47	3,375.50	3,375.50	0.00	0.00	0.00	
9,600.00	90.15	90.00	6,759.89	-773.46	3,475.50	3,475.50	0.00	0.00	0.00	
9,700.00	90.15	90.00	6,759.62	-773.45	3,575.50	3,575.50	0.00	0.00	0.00	
9,800.00	90.15	90.00	6,759.36	-773.44	3,675.50	3,675.50	0.00	0.00	0.00	
9,900.00	90.15	90.00	6,759.10	-773.43	3,775.50	3,775.50	0.00	0.00	0.00	
10,000.00	90.15	90.00	6,758.83	-773.43	3,875.50	3,875.50	0.00	0.00	0.00	
10,100.00	90.15	90.00	6,758.57	-773.42	3,975.50	3,975.50	0.00	0.00	0.00	
10,200.00	90.15	90.00	6,758.31	-773.41	4,075.50	4,075.50	0.00	0.00	0.00	
10,300.00	90.15	90.00	6,758.04	-773.40	4,175.50	4,175.50	0.00	0.00	0.00	
10,400.00	90.15	90.00	6,757.78	-773.40	4,275.50	4,275.50	0.00	0.00	0.00	
10,500.00	90.15	90.00	6,757.52	-773.39	4,375.50	4,375.50	0.00	0.00	0.00	
10,600.00	90.15	90.00	6,757.26	-773.38	4,475.50	4,475.50	0.00	0.00	0.00	
10,700.00	90.15	90.00	6,756.99	-773.37	4,575.50	4,575.50	0.00	0.00	0.00	
10,800.00	90.15	90.00	6,756.73	-773.36	4,675.50	4,675.50	0.00	0.00	0.00	
10,900.00	90.15	90.00	6,756.47	-773.36	4,775.50	4,775.50	0.00	0.00	0.00	
11,000.00	90.15	90.00	6,756.20	-773.35	4,875.50	4,875.50	0.00	0.00	0.00	
11,100.00	90.15	90.00	6,755.94	-773.34	4,975.50	4,975.50	0.00	0.00	0.00	
11,200.00	90.15	90.00	6,755.68	-773.33	5,075.50	5,075.50	0.00	0.00	0.00	
11,300.00	90.15	90.00	6,755.41	-773.32	5,175.50	5,175.50	0.00	0.00	0.00	
11,400.00	90.15	90.00	6,755.15	-773.32	5,275.50	5,275.50	0.00	0.00	0.00	
11,500.00	90.15	90.00	6,754.89	-773.31	5,375.50	5,375.50	0.00	0.00	0.00	
11,600.00	90.15	90.00	6,754.62	-773.30	5,475.50	5,475.50	0.00	0.00	0.00	
11,700.00	90.15	90.00	6,754.36	-773.29	5,575.50	5,575.50	0.00	0.00	0.00	
11,800.00	90.15	90.00	6,754.10	-773.29	5,675.50	5,675.50	0.00	0.00	0.00	
11,900.00	90.15	90.00	6,753.83	-773.28	5,775.50	5,775.50	0.00	0.00	0.00	
12,000.00	90.15	90.00	6,753.57	-773.27	5,875.50	5,875.50	0.00	0.00	0.00	
12,100.00	90.15	90.00	6,753.31	-773.26	5,975.50	5,975.50	0.00	0.00	0.00	
12,200.00	90.15	90.00	6,753.05	-773.25	6,075.49	6,075.49	0.00	0.00	0.00	
12,300.00	90.15	90.00	6,752.78	-773.25	6,175.49	6,175.49	0.00	0.00	0.00	
12,400.00	90.15	90.00	6,752.52	-773.24	6,275.49	6,275.49	0.00	0.00	0.00	
12,500.00	90.15	90.00	6,752.26	-773.23	6,375.49	6,375.49	0.00	0.00	0.00	
12,600.00	90.15	90.00	6,751.99	-773.22	6,475.49	6,475.49	0.00	0.00	0.00	
12,700.00	90.15	90.00	6,751.73	-773.22	6,575.49	6,575.49	0.00	0.00	0.00	
12,800.00	90.15	90.00	6,751.47	-773.21	6,675.49	6,675.49	0.00	0.00	0.00	
12,900.00	90.15	90.00	6,751.20	-773.20	6,775.49	6,775.49	0.00	0.00	0.00	
13,000.00	90.15	90.00	6,750.94	-773.19	6,875.49	6,875.49	0.00	0.00	0.00	
13,100.00	90.15	90.00	6,750.68	-773.18	6,975.49	6,975.49	0.00	0.00	0.00	
13,200.00	90.15	90.00	6,750.41	-773.18	7,075.49	7,075.49	0.00	0.00	0.00	
13,300.00	90.15	90.00	6,750.15	-773.17	7,175.49	7,175.49	0.00	0.00	0.00	
13,400.00	90.15	90.00	6,749.89	-773.16	7,275.49	7,275.49	0.00	0.00	0.00	
13,500.00	90.15	90.00	6,749.62	-773.15	7,375.49	7,375.49	0.00	0.00	0.00	

# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well JODSTER NORTH 25-12HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4878.00usft (Drilling Rig)
<b>Project:</b>	LARIMER-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4878.00usft (Drilling Rig)
<b>Site:</b>	5N-68W-25 JODSTER NORTH 8-25HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	JODSTER NORTH 25-12HZ	<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)
13,600.00	90.15	90.00	6,749.36	-773.15	7,475.49	7,475.49	0.00	0.00	0.00
13,700.00	90.15	90.00	6,749.10	-773.14	7,575.49	7,575.49	0.00	0.00	0.00
13,800.00	90.15	90.00	6,748.84	-773.13	7,675.49	7,675.49	0.00	0.00	0.00
13,900.00	90.15	90.00	6,748.57	-773.12	7,775.49	7,775.49	0.00	0.00	0.00
14,000.00	90.15	90.00	6,748.31	-773.11	7,875.49	7,875.49	0.00	0.00	0.00
14,100.00	90.15	90.00	6,748.05	-773.11	7,975.49	7,975.49	0.00	0.00	0.00
14,200.00	90.15	90.00	6,747.78	-773.10	8,075.49	8,075.49	0.00	0.00	0.00
14,300.00	90.15	90.00	6,747.52	-773.09	8,175.49	8,175.49	0.00	0.00	0.00
14,400.00	90.15	90.00	6,747.26	-773.08	8,275.49	8,275.49	0.00	0.00	0.00
14,500.00	90.15	90.00	6,746.99	-773.08	8,375.49	8,375.49	0.00	0.00	0.00
14,600.00	90.15	90.00	6,746.73	-773.07	8,475.49	8,475.49	0.00	0.00	0.00
14,700.00	90.15	90.00	6,746.47	-773.06	8,575.49	8,575.49	0.00	0.00	0.00
14,800.00	90.15	90.00	6,746.20	-773.05	8,675.49	8,675.49	0.00	0.00	0.00
14,900.00	90.15	90.00	6,745.94	-773.04	8,775.49	8,775.49	0.00	0.00	0.00
15,000.00	90.15	90.00	6,745.68	-773.04	8,875.49	8,875.49	0.00	0.00	0.00
15,100.00	90.15	90.00	6,745.41	-773.03	8,975.48	8,975.48	0.00	0.00	0.00
15,200.00	90.15	90.00	6,745.15	-773.02	9,075.48	9,075.48	0.00	0.00	0.00
15,300.00	90.15	90.00	6,744.89	-773.01	9,175.48	9,175.48	0.00	0.00	0.00
15,400.00	90.15	90.00	6,744.63	-773.00	9,275.48	9,275.48	0.00	0.00	0.00
15,500.00	90.15	90.00	6,744.36	-773.00	9,375.48	9,375.48	0.00	0.00	0.00
15,600.00	90.15	90.00	6,744.10	-772.99	9,475.48	9,475.48	0.00	0.00	0.00
15,700.00	90.15	90.00	6,743.84	-772.98	9,575.48	9,575.48	0.00	0.00	0.00
15,800.00	90.15	90.00	6,743.57	-772.97	9,675.48	9,675.48	0.00	0.00	0.00
15,900.00	90.15	90.00	6,743.31	-772.97	9,775.48	9,775.48	0.00	0.00	0.00
16,000.00	90.15	90.00	6,743.05	-772.96	9,875.48	9,875.48	0.00	0.00	0.00
16,100.00	90.15	90.00	6,742.78	-772.95	9,975.48	9,975.48	0.00	0.00	0.00
16,200.00	90.15	90.00	6,742.52	-772.94	10,075.48	10,075.48	0.00	0.00	0.00
16,300.00	90.15	90.00	6,742.26	-772.93	10,175.48	10,175.48	0.00	0.00	0.00
16,400.00	90.15	90.00	6,741.99	-772.93	10,275.48	10,275.48	0.00	0.00	0.00
16,500.00	90.15	90.00	6,741.73	-772.92	10,375.48	10,375.48	0.00	0.00	0.00
16,600.00	90.15	90.00	6,741.47	-772.91	10,475.48	10,475.48	0.00	0.00	0.00
16,700.00	90.15	90.00	6,741.20	-772.90	10,575.48	10,575.48	0.00	0.00	0.00
16,800.00	90.15	90.00	6,740.94	-772.90	10,675.48	10,675.48	0.00	0.00	0.00
16,900.00	90.15	90.00	6,740.68	-772.89	10,775.48	10,775.48	0.00	0.00	0.00
17,000.00	90.15	90.00	6,740.41	-772.88	10,875.48	10,875.48	0.00	0.00	0.00
17,100.00	90.15	90.00	6,740.15	-772.87	10,975.48	10,975.48	0.00	0.00	0.00
17,200.00	90.15	90.00	6,739.89	-772.86	11,075.48	11,075.48	0.00	0.00	0.00
17,300.00	90.15	90.00	6,739.63	-772.86	11,175.48	11,175.48	0.00	0.00	0.00
17,400.00	90.15	90.00	6,739.36	-772.85	11,275.48	11,275.48	0.00	0.00	0.00
17,500.00	90.15	90.00	6,739.10	-772.84	11,375.48	11,375.48	0.00	0.00	0.00
17,537.66	90.15	90.00	6,739.00	-772.84	11,413.14	11,413.14	0.00	0.00	0.00
TD Well @ 17537.66ft									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,518.84	1,500.00	9 5/8"	9-5/8	13-1/2	
7,278.52	6,766.00	Top of Production	5-1/2	7-7/8	



# Corporate Planning Report

<b>Database:</b>	PLANNING	<b>Local Co-ordinate Reference:</b>	Well JODSTER NORTH 25-12HZ
<b>Company:</b>	US ROCKIES WATTENBERG PLANNING	<b>TVD Reference:</b>	RKB = 17' @ 4878.00usft (Drilling Rig)
<b>Project:</b>	LARIMER-NAD83-UTMFT13N	<b>MD Reference:</b>	RKB = 17' @ 4878.00usft (Drilling Rig)
<b>Site:</b>	5N-68W-25 JODSTER NORTH 8-25HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	JODSTER NORTH 25-12HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	Plan A		
<b>Design:</b>	Permit Rev-1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,353.83	1,340.00	Fox Hills				
3,418.56	3,342.00	Parkman				
3,929.07	3,837.00	Sussex				
6,978.91	6,705.00	Sharon Springs				
7,115.74	6,748.00	Niobrara				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
270.00	270.00	0.00	0.00	Begin Nudge @ 270.00ft	
1,214.00	1,204.42	-101.11	56.97	End Nudge @ 1214.00ft	
4,014.00	3,919.35	-697.86	393.22	Begin Drop @ 4014.00ft	
4,722.00	4,620.16	-773.69	435.95	End Drop @ 4722.00ft	
6,151.64	6,049.80	-773.69	435.95	KOP @ 6151.64ft :: DLS = 8"/100'	
7,278.52	6,766.00	-773.64	1,154.04	End Build @ 7278.52ft	
17,537.66	6,739.00	-772.84	11,413.14	TD Well @ 17537.66ft	