

US ROCKIES WATTENBERG PLANNING

LARIMER-NAD83-UTMFT13N

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

JODSTER NORTH 25-8HZ

Plan A

Plan: Permit Rev-1

SHL Lat/Long: 40.373596/-104.949094

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 25-8HZ
Wellbore: Plan A
Design: Permit Rev-1

US ROCKIES WATTENBERG PLANNING

CASING DETAILS

TVD	MD	Size
1500.00	1509.24	9-5/8
6776.00	7223.37	5-1/2

WELL DETAILS: JODSTER NORTH 25-8HZ

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	320.00	0.00	0.00	320.00	0.00	0.00	0.00	0.00	0.00	
3	900.00	8.70	64.00	897.77	19.27	39.50	1.50	64.00	39.47	
4	3700.00	8.70	64.00	3665.56	204.93	420.17	0.00	0.00	419.81	
5	4135.00	0.00	0.00	4098.89	219.38	449.80	2.00	180.00	449.41	
6	6095.92	0.00	0.00	6059.81	219.38	449.80	0.00	0.00	449.41	
7	7223.37	90.20	90.10	6776.00	218.11	1168.44	8.00	90.10	1168.05	
8	17471.18	90.20	90.10	6741.00	200.07	11416.17	0.00	0.00	11415.81	JODSTER NORTH 25-8HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
JODSTER NORTH 25-8HZ_SHL	0.00	0.00	0.00	40.373596	-104.949094
JODSTER NORTH 25-8HZ_BHL	6741.00	200.07	11416.17	40.374138	-104.908105

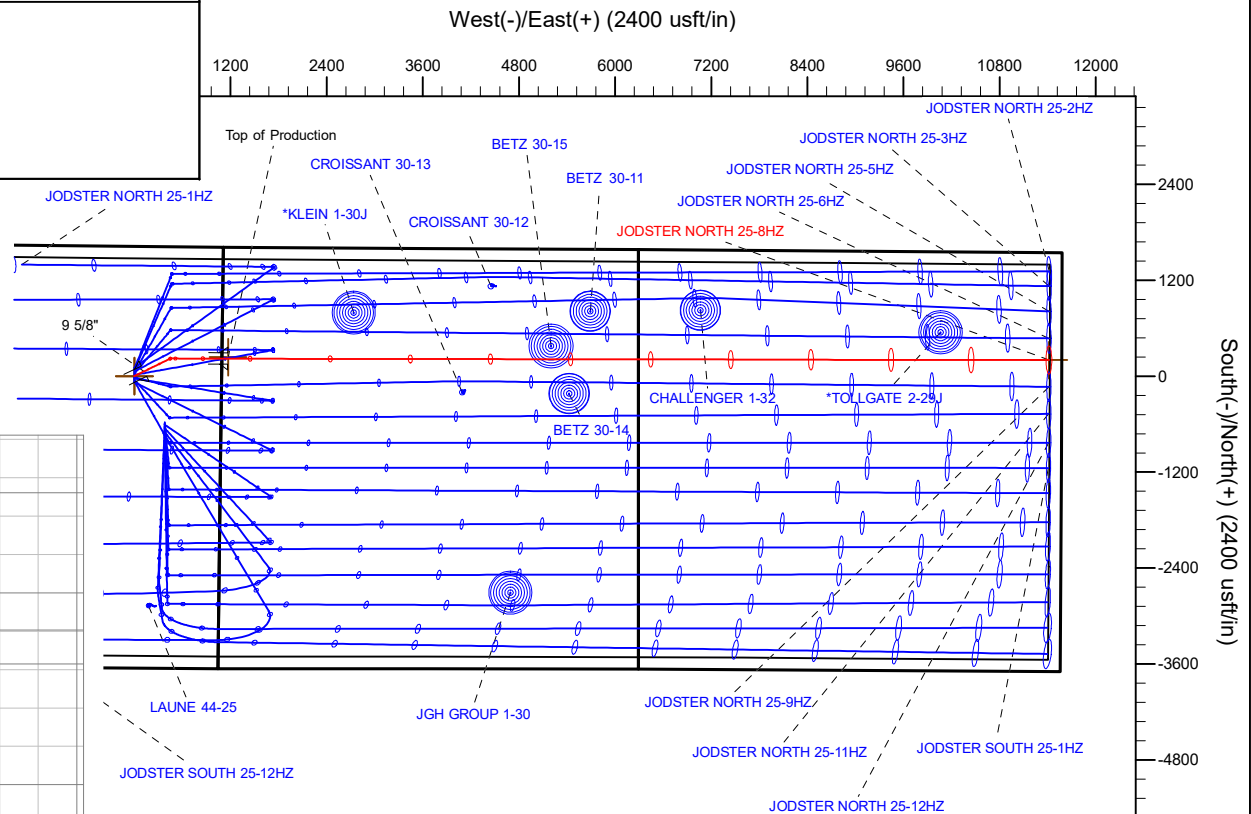
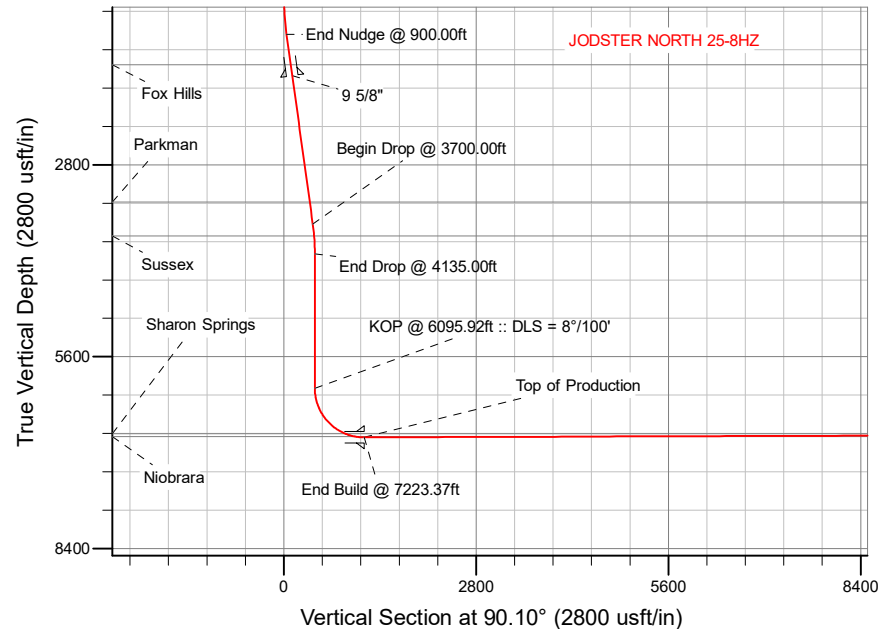
SHL
1623' FNL
1091' FEL

HEEL
1394' FNL
75' FWL

TOE
1345' FNL
160' FEL

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1340.00	1347.37	Fox Hills
3342.00	3372.68	Parkman
3837.00	3872.75	Sussex
6723.00	6943.65	Sharon Springs
6766.00	7101.07	Niobrara



Plan: Permit Rev-1 (JODSTER NORTH 25-8HZ/Plan A)

Date: 9/10/2018

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well JODSTER NORTH 25-8HZ
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 25-8HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

Project	LARIMER-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	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 25-8HZ			
Well Position	+N/-S	-104.88 usft	Northing:	14,662,783.35 usft
	+E/-W	-1.11 usft	Easting:	1,654,594.94 usft
Position Uncertainty	3.28 usft	Wellhead Elevation:		Ground Level: 4,861.00 usft

Wellbore	Plan A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	9/5/2018	8.18	66.77	52,219.84408791

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	90.10

Plan Survey Tool Program	Date	9/10/2018		
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	7,210.00	17,471.18	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 25-8HZ
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 25-8HZ	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	
320.00	0.00	0.00	320.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	8.70	64.00	897.77	19.27	39.50	1.50	1.50	0.00	64.00	
3,700.00	8.70	64.00	3,665.56	204.93	420.17	0.00	0.00	0.00	0.00	
4,135.00	0.00	0.00	4,098.89	219.38	449.80	2.00	-2.00	0.00	180.00	
6,095.92	0.00	0.00	6,059.81	219.38	449.80	0.00	0.00	0.00	0.00	
7,223.37	90.20	90.10	6,776.00	218.11	1,168.44	8.00	8.00	7.99	90.10	
17,471.18	90.20	90.10	6,741.00	200.07	11,416.17	0.00	0.00	0.00	0.00	JODSTER NORTH 25

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well JODSTER NORTH 25-8HZ
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 25-8HZ	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
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
320.00	0.00	0.00	320.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 320.00ft									
400.00	1.20	64.00	399.99	0.37	0.75	0.75	1.50	1.50	0.00
500.00	2.70	64.00	499.93	1.86	3.81	3.81	1.50	1.50	0.00
600.00	4.20	64.00	599.75	4.50	9.22	9.21	1.50	1.50	0.00
700.00	5.70	64.00	699.37	8.28	16.97	16.96	1.50	1.50	0.00
800.00	7.20	64.00	798.74	13.20	27.07	27.05	1.50	1.50	0.00
900.00	8.70	64.00	897.77	19.27	39.50	39.47	1.50	1.50	0.00
End Nudge @ 900.00ft									
1,000.00	8.70	64.00	996.62	25.90	53.10	53.05	0.00	0.00	0.00
1,100.00	8.70	64.00	1,095.47	32.53	66.69	66.64	0.00	0.00	0.00
1,200.00	8.70	64.00	1,194.32	39.16	80.29	80.22	0.00	0.00	0.00
1,300.00	8.70	64.00	1,293.17	45.79	93.88	93.80	0.00	0.00	0.00
1,347.37	8.70	64.00	1,340.00	48.93	100.32	100.24	0.00	0.00	0.00
Fox Hills									
1,400.00	8.70	64.00	1,392.02	52.42	107.48	107.39	0.00	0.00	0.00
1,500.00	8.70	64.00	1,490.87	59.05	121.07	120.97	0.00	0.00	0.00
1,509.24	8.70	64.00	1,500.00	59.66	122.33	122.22	0.00	0.00	0.00
9 5/8"									
1,600.00	8.70	64.00	1,589.72	65.68	134.67	134.55	0.00	0.00	0.00
1,700.00	8.70	64.00	1,688.57	72.31	148.26	148.14	0.00	0.00	0.00
1,800.00	8.70	64.00	1,787.42	78.94	161.86	161.72	0.00	0.00	0.00
1,900.00	8.70	64.00	1,886.27	85.57	175.45	175.30	0.00	0.00	0.00
2,000.00	8.70	64.00	1,985.12	92.21	189.05	188.89	0.00	0.00	0.00
2,100.00	8.70	64.00	2,083.97	98.84	202.64	202.47	0.00	0.00	0.00
2,200.00	8.70	64.00	2,182.82	105.47	216.24	216.06	0.00	0.00	0.00
2,300.00	8.70	64.00	2,281.67	112.10	229.84	229.64	0.00	0.00	0.00
2,400.00	8.70	64.00	2,380.51	118.73	243.43	243.22	0.00	0.00	0.00
2,500.00	8.70	64.00	2,479.36	125.36	257.03	256.81	0.00	0.00	0.00
2,600.00	8.70	64.00	2,578.21	131.99	270.62	270.39	0.00	0.00	0.00
2,700.00	8.70	64.00	2,677.06	138.62	284.22	283.97	0.00	0.00	0.00
2,800.00	8.70	64.00	2,775.91	145.25	297.81	297.56	0.00	0.00	0.00
2,900.00	8.70	64.00	2,874.76	151.88	311.41	311.14	0.00	0.00	0.00
3,000.00	8.70	64.00	2,973.61	158.51	325.00	324.72	0.00	0.00	0.00
3,100.00	8.70	64.00	3,072.46	165.14	338.60	338.31	0.00	0.00	0.00
3,200.00	8.70	64.00	3,171.31	171.78	352.19	351.89	0.00	0.00	0.00
3,300.00	8.70	64.00	3,270.16	178.41	365.79	365.48	0.00	0.00	0.00
3,372.68	8.70	64.00	3,342.00	183.23	375.67	375.35	0.00	0.00	0.00
Parkman									
3,400.00	8.70	64.00	3,369.01	185.04	379.38	379.06	0.00	0.00	0.00
3,500.00	8.70	64.00	3,467.86	191.67	392.98	392.64	0.00	0.00	0.00
3,600.00	8.70	64.00	3,566.71	198.30	406.57	406.23	0.00	0.00	0.00
3,700.00	8.70	64.00	3,665.56	204.93	420.17	419.81	0.00	0.00	0.00
Begin Drop @ 3700.00ft									
3,800.00	6.70	64.00	3,764.65	210.80	432.21	431.84	2.00	-2.00	0.00
3,872.75	5.25	64.00	3,837.00	214.12	439.01	438.64	2.00	-2.00	0.00
Sussex									
3,900.00	4.70	64.00	3,864.15	215.16	441.14	440.76	2.00	-2.00	0.00
4,000.00	2.70	64.00	3,963.94	217.99	446.94	446.56	2.00	-2.00	0.00

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well JODSTER NORTH 25-8HZ
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 25-8HZ	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)
4,100.00	0.70	64.00	4,063.89	219.29	449.60	449.22	2.00	-2.00	0.00
4,135.00	0.00	0.00	4,098.89	219.38	449.80	449.41	2.00	-2.00	0.00
End Drop @ 4135.00ft									
4,200.00	0.00	0.00	4,163.89	219.38	449.80	449.41	0.00	0.00	0.00
4,300.00	0.00	0.00	4,263.89	219.38	449.80	449.41	0.00	0.00	0.00
4,400.00	0.00	0.00	4,363.89	219.38	449.80	449.41	0.00	0.00	0.00
4,500.00	0.00	0.00	4,463.89	219.38	449.80	449.41	0.00	0.00	0.00
4,600.00	0.00	0.00	4,563.89	219.38	449.80	449.41	0.00	0.00	0.00
4,700.00	0.00	0.00	4,663.89	219.38	449.80	449.41	0.00	0.00	0.00
4,800.00	0.00	0.00	4,763.89	219.38	449.80	449.41	0.00	0.00	0.00
4,900.00	0.00	0.00	4,863.89	219.38	449.80	449.41	0.00	0.00	0.00
5,000.00	0.00	0.00	4,963.89	219.38	449.80	449.41	0.00	0.00	0.00
5,100.00	0.00	0.00	5,063.89	219.38	449.80	449.41	0.00	0.00	0.00
5,200.00	0.00	0.00	5,163.89	219.38	449.80	449.41	0.00	0.00	0.00
5,300.00	0.00	0.00	5,263.89	219.38	449.80	449.41	0.00	0.00	0.00
5,400.00	0.00	0.00	5,363.89	219.38	449.80	449.41	0.00	0.00	0.00
5,500.00	0.00	0.00	5,463.89	219.38	449.80	449.41	0.00	0.00	0.00
5,600.00	0.00	0.00	5,563.89	219.38	449.80	449.41	0.00	0.00	0.00
5,700.00	0.00	0.00	5,663.89	219.38	449.80	449.41	0.00	0.00	0.00
5,800.00	0.00	0.00	5,763.89	219.38	449.80	449.41	0.00	0.00	0.00
5,900.00	0.00	0.00	5,863.89	219.38	449.80	449.41	0.00	0.00	0.00
6,000.00	0.00	0.00	5,963.89	219.38	449.80	449.41	0.00	0.00	0.00
6,095.92	0.00	0.00	6,059.81	219.38	449.80	449.41	0.00	0.00	0.00
KOP @ 6095.92ft :: DLS = 8°/100'									
6,100.00	0.33	90.10	6,063.89	219.38	449.81	449.42	8.00	8.00	0.00
6,200.00	8.33	90.10	6,163.52	219.37	457.34	456.96	8.00	8.00	0.00
6,300.00	16.33	90.10	6,261.14	219.33	478.68	478.29	8.00	8.00	0.00
6,400.00	24.33	90.10	6,354.83	219.27	513.38	513.00	8.00	8.00	0.00
6,500.00	32.33	90.10	6,442.79	219.18	560.79	560.41	8.00	8.00	0.00
6,600.00	40.33	90.10	6,523.29	219.08	619.98	619.60	8.00	8.00	0.00
6,700.00	48.33	90.10	6,594.77	218.96	689.80	689.42	8.00	8.00	0.00
6,800.00	56.33	90.10	6,655.83	218.82	768.89	768.51	8.00	8.00	0.00
6,900.00	64.33	90.10	6,705.30	218.67	855.70	855.32	8.00	8.00	0.00
6,943.65	67.82	90.10	6,723.00	218.59	895.60	895.21	8.00	8.00	0.00
Sharon Springs									
7,000.00	72.33	90.10	6,742.20	218.50	948.56	948.18	8.00	8.00	0.00
7,100.00	80.33	90.10	6,765.82	218.33	1,045.65	1,045.26	8.00	8.00	0.00
7,101.07	80.41	90.10	6,766.00	218.33	1,046.70	1,046.32	8.00	8.00	0.00
Niobrara									
7,200.00	88.33	90.10	6,775.70	218.16	1,145.07	1,144.69	8.00	8.00	0.00
7,223.37	90.20	90.10	6,776.00	218.11	1,168.44	1,168.06	8.00	8.00	0.00
End Build @ 7223.37ft - Top of Production									
7,300.00	90.20	90.10	6,775.74	217.98	1,245.07	1,244.69	0.00	0.00	0.00
7,400.00	90.20	90.10	6,775.40	217.80	1,345.07	1,344.69	0.00	0.00	0.00
7,500.00	90.20	90.10	6,775.06	217.63	1,445.07	1,444.69	0.00	0.00	0.00
7,600.00	90.20	90.10	6,774.71	217.45	1,545.07	1,544.69	0.00	0.00	0.00
7,700.00	90.20	90.10	6,774.37	217.28	1,645.07	1,644.69	0.00	0.00	0.00
7,800.00	90.20	90.10	6,774.03	217.10	1,745.07	1,744.69	0.00	0.00	0.00
7,900.00	90.20	90.10	6,773.69	216.92	1,845.07	1,844.68	0.00	0.00	0.00
8,000.00	90.20	90.10	6,773.35	216.75	1,945.07	1,944.68	0.00	0.00	0.00
8,100.00	90.20	90.10	6,773.01	216.57	2,045.06	2,044.68	0.00	0.00	0.00
8,200.00	90.20	90.10	6,772.66	216.40	2,145.06	2,144.68	0.00	0.00	0.00
8,300.00	90.20	90.10	6,772.32	216.22	2,245.06	2,244.68	0.00	0.00	0.00
8,400.00	90.20	90.10	6,771.98	216.04	2,345.06	2,344.68	0.00	0.00	0.00

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well JODSTER NORTH 25-8HZ
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 25-8HZ	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)
8,500.00	90.20	90.10	6,771.64	215.87	2,445.06	2,444.68	0.00	0.00	0.00
8,600.00	90.20	90.10	6,771.30	215.69	2,545.06	2,544.68	0.00	0.00	0.00
8,700.00	90.20	90.10	6,770.96	215.51	2,645.06	2,644.68	0.00	0.00	0.00
8,800.00	90.20	90.10	6,770.62	215.34	2,745.06	2,744.68	0.00	0.00	0.00
8,900.00	90.20	90.10	6,770.27	215.16	2,845.06	2,844.68	0.00	0.00	0.00
9,000.00	90.20	90.10	6,769.93	214.99	2,945.06	2,944.68	0.00	0.00	0.00
9,100.00	90.20	90.10	6,769.59	214.81	3,045.06	3,044.68	0.00	0.00	0.00
9,200.00	90.20	90.10	6,769.25	214.63	3,145.06	3,144.68	0.00	0.00	0.00
9,300.00	90.20	90.10	6,768.91	214.46	3,245.06	3,244.68	0.00	0.00	0.00
9,400.00	90.20	90.10	6,768.57	214.28	3,345.06	3,344.68	0.00	0.00	0.00
9,500.00	90.20	90.10	6,768.22	214.11	3,445.05	3,444.68	0.00	0.00	0.00
9,600.00	90.20	90.10	6,767.88	213.93	3,545.05	3,544.68	0.00	0.00	0.00
9,700.00	90.20	90.10	6,767.54	213.75	3,645.05	3,644.67	0.00	0.00	0.00
9,800.00	90.20	90.10	6,767.20	213.58	3,745.05	3,744.67	0.00	0.00	0.00
9,900.00	90.20	90.10	6,766.86	213.40	3,845.05	3,844.67	0.00	0.00	0.00
10,000.00	90.20	90.10	6,766.52	213.23	3,945.05	3,944.67	0.00	0.00	0.00
10,100.00	90.20	90.10	6,766.18	213.05	4,045.05	4,044.67	0.00	0.00	0.00
10,200.00	90.20	90.10	6,765.83	212.87	4,145.05	4,144.67	0.00	0.00	0.00
10,300.00	90.20	90.10	6,765.49	212.70	4,245.05	4,244.67	0.00	0.00	0.00
10,400.00	90.20	90.10	6,765.15	212.52	4,345.05	4,344.67	0.00	0.00	0.00
10,500.00	90.20	90.10	6,764.81	212.35	4,445.05	4,444.67	0.00	0.00	0.00
10,600.00	90.20	90.10	6,764.47	212.17	4,545.05	4,544.67	0.00	0.00	0.00
10,700.00	90.20	90.10	6,764.13	211.99	4,645.05	4,644.67	0.00	0.00	0.00
10,800.00	90.20	90.10	6,763.78	211.82	4,745.05	4,744.67	0.00	0.00	0.00
10,900.00	90.20	90.10	6,763.44	211.64	4,845.04	4,844.67	0.00	0.00	0.00
11,000.00	90.20	90.10	6,763.10	211.47	4,945.04	4,944.67	0.00	0.00	0.00
11,100.00	90.20	90.10	6,762.76	211.29	5,045.04	5,044.67	0.00	0.00	0.00
11,200.00	90.20	90.10	6,762.42	211.11	5,145.04	5,144.67	0.00	0.00	0.00
11,300.00	90.20	90.10	6,762.08	210.94	5,245.04	5,244.67	0.00	0.00	0.00
11,400.00	90.20	90.10	6,761.74	210.76	5,345.04	5,344.66	0.00	0.00	0.00
11,500.00	90.20	90.10	6,761.39	210.59	5,445.04	5,444.66	0.00	0.00	0.00
11,600.00	90.20	90.10	6,761.05	210.41	5,545.04	5,544.66	0.00	0.00	0.00
11,700.00	90.20	90.10	6,760.71	210.23	5,645.04	5,644.66	0.00	0.00	0.00
11,800.00	90.20	90.10	6,760.37	210.06	5,745.04	5,744.66	0.00	0.00	0.00
11,900.00	90.20	90.10	6,760.03	209.88	5,845.04	5,844.66	0.00	0.00	0.00
12,000.00	90.20	90.10	6,759.69	209.70	5,945.04	5,944.66	0.00	0.00	0.00
12,100.00	90.20	90.10	6,759.34	209.53	6,045.04	6,044.66	0.00	0.00	0.00
12,200.00	90.20	90.10	6,759.00	209.35	6,145.03	6,144.66	0.00	0.00	0.00
12,300.00	90.20	90.10	6,758.66	209.18	6,245.03	6,244.66	0.00	0.00	0.00
12,400.00	90.20	90.10	6,758.32	209.00	6,345.03	6,344.66	0.00	0.00	0.00
12,500.00	90.20	90.10	6,757.98	208.82	6,445.03	6,444.66	0.00	0.00	0.00
12,600.00	90.20	90.10	6,757.64	208.65	6,545.03	6,544.66	0.00	0.00	0.00
12,700.00	90.20	90.10	6,757.30	208.47	6,645.03	6,644.66	0.00	0.00	0.00
12,800.00	90.20	90.10	6,756.95	208.30	6,745.03	6,744.66	0.00	0.00	0.00
12,900.00	90.20	90.10	6,756.61	208.12	6,845.03	6,844.66	0.00	0.00	0.00
13,000.00	90.20	90.10	6,756.27	207.94	6,945.03	6,944.66	0.00	0.00	0.00
13,100.00	90.20	90.10	6,755.93	207.77	7,045.03	7,044.65	0.00	0.00	0.00
13,200.00	90.20	90.10	6,755.59	207.59	7,145.03	7,144.65	0.00	0.00	0.00
13,300.00	90.20	90.10	6,755.25	207.42	7,245.03	7,244.65	0.00	0.00	0.00
13,400.00	90.20	90.10	6,754.90	207.24	7,345.03	7,344.65	0.00	0.00	0.00
13,500.00	90.20	90.10	6,754.56	207.06	7,445.03	7,444.65	0.00	0.00	0.00
13,600.00	90.20	90.10	6,754.22	206.89	7,545.02	7,544.65	0.00	0.00	0.00
13,700.00	90.20	90.10	6,753.88	206.71	7,645.02	7,644.65	0.00	0.00	0.00
13,800.00	90.20	90.10	6,753.54	206.54	7,745.02	7,744.65	0.00	0.00	0.00

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well JODSTER NORTH 25-8HZ
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 25-8HZ	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)	
13,900.00	90.20	90.10	6,753.20	206.36	7,845.02	7,844.65	0.00	0.00	0.00	
14,000.00	90.20	90.10	6,752.86	206.18	7,945.02	7,944.65	0.00	0.00	0.00	
14,100.00	90.20	90.10	6,752.51	206.01	8,045.02	8,044.65	0.00	0.00	0.00	
14,200.00	90.20	90.10	6,752.17	205.83	8,145.02	8,144.65	0.00	0.00	0.00	
14,300.00	90.20	90.10	6,751.83	205.66	8,245.02	8,244.65	0.00	0.00	0.00	
14,400.00	90.20	90.10	6,751.49	205.48	8,345.02	8,344.65	0.00	0.00	0.00	
14,500.00	90.20	90.10	6,751.15	205.30	8,445.02	8,444.65	0.00	0.00	0.00	
14,600.00	90.20	90.10	6,750.81	205.13	8,545.02	8,544.65	0.00	0.00	0.00	
14,700.00	90.20	90.10	6,750.46	204.95	8,645.02	8,644.65	0.00	0.00	0.00	
14,800.00	90.20	90.10	6,750.12	204.78	8,745.02	8,744.64	0.00	0.00	0.00	
14,900.00	90.20	90.10	6,749.78	204.60	8,845.01	8,844.64	0.00	0.00	0.00	
15,000.00	90.20	90.10	6,749.44	204.42	8,945.01	8,944.64	0.00	0.00	0.00	
15,100.00	90.20	90.10	6,749.10	204.25	9,045.01	9,044.64	0.00	0.00	0.00	
15,200.00	90.20	90.10	6,748.76	204.07	9,145.01	9,144.64	0.00	0.00	0.00	
15,300.00	90.20	90.10	6,748.42	203.90	9,245.01	9,244.64	0.00	0.00	0.00	
15,400.00	90.20	90.10	6,748.07	203.72	9,345.01	9,344.64	0.00	0.00	0.00	
15,500.00	90.20	90.10	6,747.73	203.54	9,445.01	9,444.64	0.00	0.00	0.00	
15,600.00	90.20	90.10	6,747.39	203.37	9,545.01	9,544.64	0.00	0.00	0.00	
15,700.00	90.20	90.10	6,747.05	203.19	9,645.01	9,644.64	0.00	0.00	0.00	
15,800.00	90.20	90.10	6,746.71	203.01	9,745.01	9,744.64	0.00	0.00	0.00	
15,900.00	90.20	90.10	6,746.37	202.84	9,845.01	9,844.64	0.00	0.00	0.00	
16,000.00	90.20	90.10	6,746.02	202.66	9,945.01	9,944.64	0.00	0.00	0.00	
16,100.00	90.20	90.10	6,745.68	202.49	10,045.01	10,044.64	0.00	0.00	0.00	
16,200.00	90.20	90.10	6,745.34	202.31	10,145.01	10,144.64	0.00	0.00	0.00	
16,300.00	90.20	90.10	6,745.00	202.13	10,245.00	10,244.64	0.00	0.00	0.00	
16,400.00	90.20	90.10	6,744.66	201.96	10,345.00	10,344.64	0.00	0.00	0.00	
16,500.00	90.20	90.10	6,744.32	201.78	10,445.00	10,444.63	0.00	0.00	0.00	
16,600.00	90.20	90.10	6,743.98	201.61	10,545.00	10,544.63	0.00	0.00	0.00	
16,700.00	90.20	90.10	6,743.63	201.43	10,645.00	10,644.63	0.00	0.00	0.00	
16,800.00	90.20	90.10	6,743.29	201.25	10,745.00	10,744.63	0.00	0.00	0.00	
16,900.00	90.20	90.10	6,742.95	201.08	10,845.00	10,844.63	0.00	0.00	0.00	
17,000.00	90.20	90.10	6,742.61	200.90	10,945.00	10,944.63	0.00	0.00	0.00	
17,100.00	90.20	90.10	6,742.27	200.73	11,045.00	11,044.63	0.00	0.00	0.00	
17,200.00	90.20	90.10	6,741.93	200.55	11,145.00	11,144.63	0.00	0.00	0.00	
17,300.00	90.20	90.10	6,741.58	200.37	11,245.00	11,244.63	0.00	0.00	0.00	
17,400.00	90.20	90.10	6,741.24	200.20	11,345.00	11,344.63	0.00	0.00	0.00	
17,471.18	90.20	90.10	6,741.00	200.07	11,416.17	11,415.81	0.00	0.00	0.00	
TD Well @ 17471.18ft										

Casing Points						
Measured Depth (usft)	Vertical Depth (usft)	Name			Casing Diameter (")	Hole Diameter (")
1,509.24	1,500.00	9 5/8"			9-5/8	13-1/2
7,223.37	6,776.00	Top of Production			5-1/2	7-7/8

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well JODSTER NORTH 25-8HZ
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 25-8HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,347.37	1,340.00	Fox Hills				
3,372.68	3,342.00	Parkman				
3,872.75	3,837.00	Sussex				
6,943.65	6,723.00	Sharon Springs				
7,101.07	6,766.00	Niobrara				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
320.00	320.00	0.00	0.00	Begin Nudge @ 320.00ft	
900.00	897.77	19.27	39.50	End Nudge @ 900.00ft	
3,700.00	3,665.56	204.93	420.17	Begin Drop @ 3700.00ft	
4,135.00	4,098.89	219.38	449.80	End Drop @ 4135.00ft	
6,095.92	6,059.81	219.38	449.80	KOP @ 6095.92ft :: DLS = 8°/100'	
7,223.37	6,776.00	218.11	1,168.44	End Build @ 7223.37ft	
17,471.18	6,741.00	200.07	11,416.17	TD Well @ 17471.18ft	