

US ROCKIES WATTENBERG PLANNING

LARIMER-NAD83-UTMFT13N

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

JODSTER NORTH 25-4HZ

Plan A

Plan: Permit Rev-2

SHL Lat/Long: 40.373761/-104.949092

Survey Program: MWD+IFR

Standard Planning Report

30 December, 2018

Project: LARIMER-NAD83-UTMFT13N
Site: 5N-68W-25 JODSTER NORTH 8-25HZ PAD
Well: JODSTER NORTH 25-4HZ
Wellbore: Plan A
Design: Permit Rev-2

US ROCKIES WATTENBERG PLANNING

CASING DETAILS

TVD	MD	Size
1500.00	1526.50	9-5/8
6960.00	7772.97	5-1/2

WELL DETAILS: JODSTER NORTH 25-4HZ

GL = 4861.00

RKB = 17' @ 4878.00usft (Drilling Rig)

SECTION DETAILS

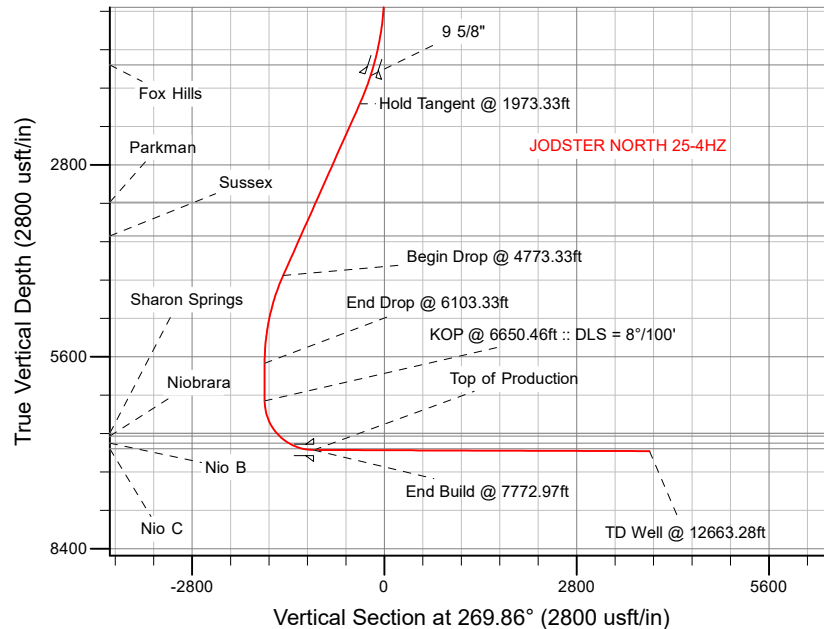
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	
3	1973.33	26.60	62.65	1910.31	185.75	359.11	1.50	62.65	-359.56	
4	4773.33	26.60	62.65	4413.95	761.74	1472.69	0.00	0.00	-1474.54	
5	6103.33	0.00	0.00	5696.68	901.05	1742.02	2.00	-180.00	-1744.21	
6	6650.46	0.00	0.00	6243.81	901.05	1742.02	0.00	0.00	-1744.21	
7	7772.97	89.80	269.86	6960.00	899.36	1028.31	8.00	269.86	-1030.51	
8	12663.28	89.80	269.86	6977.00	887.78	-3861.96	0.00	0.00	3859.77	JODSTER NORTH 25-4HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
JODSTER NORTH 25-4HZ_SHL	0.00	0.00	0.00	40.373761	-104.949092
JODSTER NORTH 25-4HZ_BHL	6977.00	887.78	-3861.96	40.376198	-104.962959

FORMATION TOP DETAILS

TVDPATH	MDPATH	Formation
1340.00	1357.64	Fox Hills
3342.00	3574.50	Parkman
3837.00	4128.09	Sussex
6714.00	7163.39	Sharon Springs
6757.00	7222.59	Niobrara
6859.00	7390.48	Nio B
6940.00	7605.79	Nio C

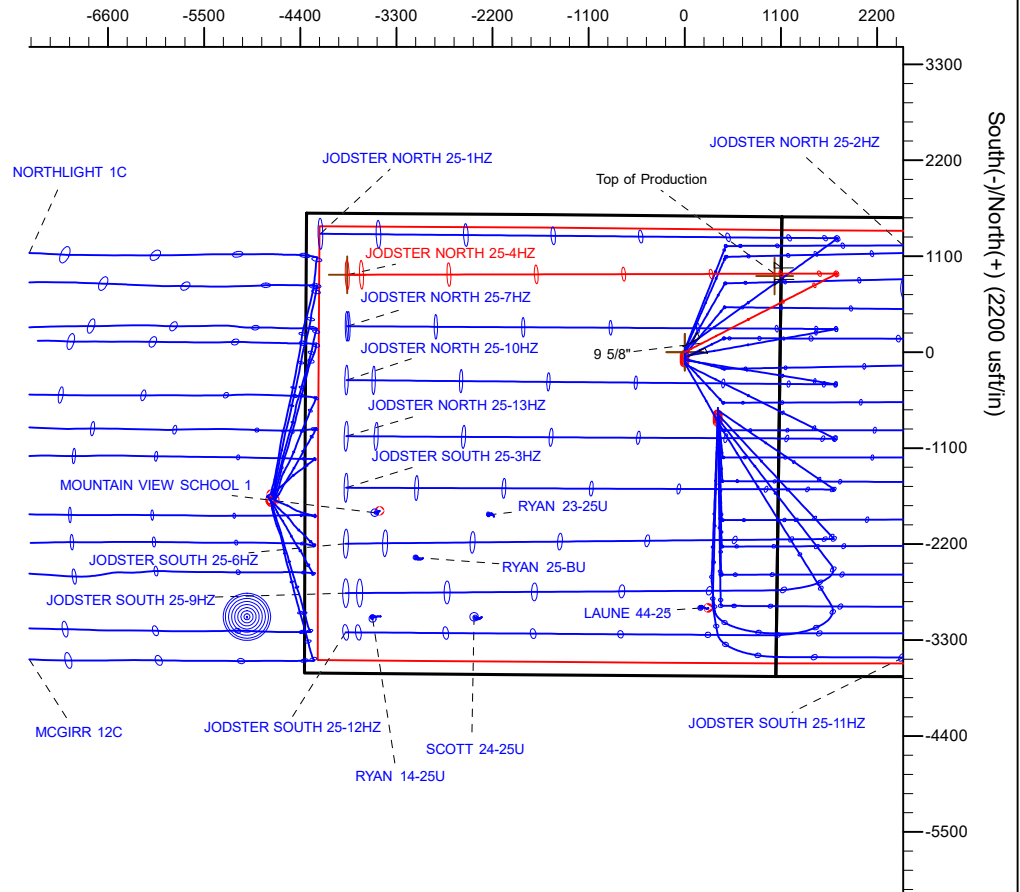


SHL
1563' FNL
1092' FEL

HEEL
652' FNL
75' FEL

TOE
704' FNL
470' FWL

West(-)/East(+) (2200 usft/in)



Plan: Permit Rev-2 (JODSTER NORTH 25-4HZ/Plan A)

Date: 12/30/2018

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well JODSTER NORTH 25-4HZ
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 25-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

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 25-4HZ				
Well Position	+N/-S	-44.79 usft	Northing:	14,662,843.44 usft	Latitude: 40.373761
	+E/-W	-0.56 usft	Easting:	1,654,595.46 usft	Longitude: -104.949092
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	52,219.92984559

Design	Permit Rev-2			
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	269.86

Plan Survey Tool Program	Date	12/29/2018		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	1,500.00	Permit Rev-2 (Plan A)	APC_ISCWSA REV 2 MWD+I Fixed:v2:crustal field declinatio
2	1,500.00	12,663.28	Permit Rev-2 (Plan A)	APC_ISCWSA REV 2 MWD+I Fixed:v2:crustal field declinatio

Corporate
Planning Report

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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 25-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

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	
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,973.33	26.60	62.65	1,910.31	185.75	359.11	1.50	1.50	0.00	62.65	
4,773.33	26.60	62.65	4,413.95	761.74	1,472.69	0.00	0.00	0.00	0.00	
6,103.33	0.00	0.00	5,696.68	901.05	1,742.02	2.00	-2.00	-4.71	-180.00	
6,650.46	0.00	0.00	6,243.81	901.05	1,742.02	0.00	0.00	0.00	0.00	
7,772.97	89.80	269.86	6,960.00	899.36	1,028.31	8.00	8.00	-8.03	269.86	
12,663.28	89.80	269.86	6,977.00	887.78	-3,861.96	0.00	0.00	0.00	0.00	JODSTER NORTH 25

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well JODSTER NORTH 25-4HZ
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 25-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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
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
Begin Nudge @ 200.00ft									
300.00	1.50	62.65	299.99	0.60	1.16	-1.16	1.50	1.50	0.00
400.00	3.00	62.65	399.91	2.40	4.65	-4.66	1.50	1.50	0.00
500.00	4.50	62.65	499.69	5.41	10.46	-10.47	1.50	1.50	0.00
600.00	6.00	62.65	599.27	9.61	18.59	-18.61	1.50	1.50	0.00
700.00	7.50	62.65	698.57	15.01	29.03	-29.06	1.50	1.50	0.00
800.00	9.00	62.65	797.54	21.61	41.77	-41.82	1.50	1.50	0.00
900.00	10.50	62.65	896.09	29.39	56.81	-56.88	1.50	1.50	0.00
1,000.00	12.00	62.65	994.16	38.35	74.14	-74.23	1.50	1.50	0.00
1,100.00	13.50	62.65	1,091.70	48.49	93.74	-93.86	1.50	1.50	0.00
1,200.00	15.00	62.65	1,188.62	59.80	115.60	-115.75	1.50	1.50	0.00
1,300.00	16.50	62.65	1,284.86	72.27	139.71	-139.89	1.50	1.50	0.00
1,357.64	17.36	62.65	1,340.00	79.98	154.62	-154.82	1.50	1.50	0.00
Fox Hills									
1,400.00	18.00	62.65	1,380.36	85.89	166.05	-166.26	1.50	1.50	0.00
1,500.00	19.50	62.65	1,475.05	100.66	194.60	-194.85	1.50	1.50	0.00
1,526.50	19.90	62.65	1,500.00	104.76	202.54	-202.79	1.50	1.50	0.00
9 5/8"									
1,600.00	21.00	62.65	1,568.86	116.56	225.34	-225.63	1.50	1.50	0.00
1,700.00	22.50	62.65	1,661.74	133.58	258.26	-258.58	1.50	1.50	0.00
1,800.00	24.00	62.65	1,753.62	151.72	293.32	-293.69	1.50	1.50	0.00
1,900.00	25.50	62.65	1,844.43	170.95	330.50	-330.92	1.50	1.50	0.00
1,973.33	26.60	62.65	1,910.31	185.75	359.11	-359.56	1.50	1.50	0.00
Hold Tangent @ 1973.33ft									
2,000.00	26.60	62.65	1,934.16	191.23	369.71	-370.18	0.00	0.00	0.00
2,100.00	26.60	62.65	2,023.57	211.80	409.48	-410.00	0.00	0.00	0.00
2,200.00	26.60	62.65	2,112.99	232.37	449.25	-449.82	0.00	0.00	0.00
2,300.00	26.60	62.65	2,202.40	252.95	489.02	-489.64	0.00	0.00	0.00
2,400.00	26.60	62.65	2,291.82	273.52	528.80	-529.46	0.00	0.00	0.00
2,500.00	26.60	62.65	2,381.24	294.09	568.57	-569.28	0.00	0.00	0.00
2,600.00	26.60	62.65	2,470.65	314.66	608.34	-609.10	0.00	0.00	0.00
2,700.00	26.60	62.65	2,560.07	335.23	648.11	-648.92	0.00	0.00	0.00
2,800.00	26.60	62.65	2,649.48	355.80	687.88	-688.75	0.00	0.00	0.00
2,900.00	26.60	62.65	2,738.90	376.37	727.65	-728.57	0.00	0.00	0.00
3,000.00	26.60	62.65	2,828.31	396.94	767.42	-768.39	0.00	0.00	0.00
3,100.00	26.60	62.65	2,917.73	417.51	807.19	-808.21	0.00	0.00	0.00
3,200.00	26.60	62.65	3,007.14	438.09	846.96	-848.03	0.00	0.00	0.00
3,300.00	26.60	62.65	3,096.56	458.66	886.73	-887.85	0.00	0.00	0.00
3,400.00	26.60	62.65	3,185.97	479.23	926.50	-927.67	0.00	0.00	0.00
3,500.00	26.60	62.65	3,275.39	499.80	966.27	-967.49	0.00	0.00	0.00
3,574.50	26.60	62.65	3,342.00	515.12	995.90	-997.16	0.00	0.00	0.00
Parkman									
3,600.00	26.60	62.65	3,364.80	520.37	1,006.04	-1,007.31	0.00	0.00	0.00
3,700.00	26.60	62.65	3,454.22	540.94	1,045.81	-1,047.13	0.00	0.00	0.00
3,800.00	26.60	62.65	3,543.64	561.51	1,085.59	-1,086.95	0.00	0.00	0.00
3,900.00	26.60	62.65	3,633.05	582.08	1,125.36	-1,126.77	0.00	0.00	0.00
4,000.00	26.60	62.65	3,722.47	602.65	1,165.13	-1,166.60	0.00	0.00	0.00
4,100.00	26.60	62.65	3,811.88	623.23	1,204.90	-1,206.42	0.00	0.00	0.00
4,128.09	26.60	62.65	3,837.00	629.00	1,216.07	-1,217.60	0.00	0.00	0.00
Sussex									

Corporate
Planning Report

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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 25-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	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)
4,200.00	26.60	62.65	3,901.30	643.80	1,244.67	-1,246.24	0.00	0.00	0.00
4,300.00	26.60	62.65	3,990.71	664.37	1,284.44	-1,286.06	0.00	0.00	0.00
4,400.00	26.60	62.65	4,080.13	684.94	1,324.21	-1,325.88	0.00	0.00	0.00
4,500.00	26.60	62.65	4,169.54	705.51	1,363.98	-1,365.70	0.00	0.00	0.00
4,600.00	26.60	62.65	4,258.96	726.08	1,403.75	-1,405.52	0.00	0.00	0.00
4,700.00	26.60	62.65	4,348.37	746.65	1,443.52	-1,445.34	0.00	0.00	0.00
4,773.33	26.60	62.65	4,413.95	761.74	1,472.69	-1,474.54	0.00	0.00	0.00
Begin Drop @ 4773.33ft									
4,800.00	26.07	62.65	4,437.85	767.17	1,483.19	-1,485.06	2.00	-2.00	0.00
4,900.00	24.07	62.65	4,528.42	786.64	1,520.82	-1,522.74	2.00	-2.00	0.00
5,000.00	22.07	62.65	4,620.42	804.64	1,555.62	-1,557.58	2.00	-2.00	0.00
5,100.00	20.07	62.65	4,713.73	821.15	1,587.55	-1,589.55	2.00	-2.00	0.00
5,200.00	18.07	62.65	4,808.24	836.16	1,616.56	-1,618.60	2.00	-2.00	0.00
5,300.00	16.07	62.65	4,903.83	849.64	1,642.63	-1,644.70	2.00	-2.00	0.00
5,400.00	14.07	62.65	5,000.39	861.58	1,665.71	-1,667.82	2.00	-2.00	0.00
5,500.00	12.07	62.65	5,097.80	871.97	1,685.80	-1,687.92	2.00	-2.00	0.00
5,600.00	10.07	62.65	5,195.93	880.79	1,702.84	-1,704.99	2.00	-2.00	0.00
5,700.00	8.07	62.65	5,294.68	888.03	1,716.84	-1,719.00	2.00	-2.00	0.00
5,800.00	6.07	62.65	5,393.91	893.68	1,727.77	-1,729.94	2.00	-2.00	0.00
5,900.00	4.07	62.65	5,493.52	897.73	1,735.61	-1,737.80	2.00	-2.00	0.00
6,000.00	2.07	62.65	5,593.37	900.19	1,740.36	-1,742.56	2.00	-2.00	0.00
6,100.00	0.07	62.65	5,693.35	901.05	1,742.02	-1,744.21	2.00	-2.00	0.00
6,103.33	0.00	0.00	5,696.68	901.05	1,742.02	-1,744.21	2.00	-2.00	-1,879.48
End Drop @ 6103.33ft									
6,200.00	0.00	0.00	5,793.35	901.05	1,742.02	-1,744.21	0.00	0.00	0.00
6,300.00	0.00	0.00	5,893.35	901.05	1,742.02	-1,744.21	0.00	0.00	0.00
6,400.00	0.00	0.00	5,993.35	901.05	1,742.02	-1,744.21	0.00	0.00	0.00
6,500.00	0.00	0.00	6,093.35	901.05	1,742.02	-1,744.21	0.00	0.00	0.00
6,600.00	0.00	0.00	6,193.35	901.05	1,742.02	-1,744.21	0.00	0.00	0.00
6,650.46	0.00	0.00	6,243.81	901.05	1,742.02	-1,744.21	0.00	0.00	0.00
KOP @ 6650.46ft :: DLS = 8°/100'									
6,700.00	3.96	269.86	6,293.31	901.04	1,740.30	-1,742.50	8.00	8.00	-181.95
6,800.00	11.96	269.86	6,392.26	901.01	1,726.46	-1,728.66	8.00	8.00	0.00
6,900.00	19.96	269.86	6,488.33	900.95	1,698.98	-1,701.18	8.00	8.00	0.00
7,000.00	27.96	269.86	6,579.64	900.85	1,658.40	-1,660.60	8.00	8.00	0.00
7,100.00	35.96	269.86	6,664.41	900.72	1,605.51	-1,607.70	8.00	8.00	0.00
7,163.39	41.03	269.86	6,714.00	900.63	1,566.06	-1,568.25	8.00	8.00	0.00
Sharon Springs									
7,200.00	43.96	269.86	6,740.99	900.57	1,541.33	-1,543.52	8.00	8.00	0.00
7,222.59	45.77	269.86	6,757.00	900.54	1,525.39	-1,527.59	8.00	8.00	0.00
Niobrara									
7,300.00	51.96	269.86	6,807.90	900.40	1,467.12	-1,469.31	8.00	8.00	0.00
7,390.48	59.20	269.86	6,859.00	900.22	1,392.53	-1,394.73	8.00	8.00	0.00
Nio B									
7,400.00	59.96	269.86	6,863.82	900.20	1,384.32	-1,386.51	8.00	8.00	0.00
7,500.00	67.96	269.86	6,907.68	899.99	1,294.54	-1,296.73	8.00	8.00	0.00
7,600.00	75.96	269.86	6,938.62	899.76	1,199.53	-1,201.73	8.00	8.00	0.00
7,605.79	76.43	269.86	6,940.00	899.75	1,193.91	-1,196.11	8.00	8.00	0.00
Nio C									
7,700.00	83.96	269.86	6,956.03	899.53	1,101.14	-1,103.34	8.00	8.00	0.00
7,772.97	89.80	269.86	6,960.00	899.36	1,028.31	-1,030.51	8.00	8.00	0.00
End Build @ 7772.97ft - Top of Production									
7,800.00	89.80	269.86	6,960.09	899.29	1,001.28	-1,003.48	0.00	0.00	0.00

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well JODSTER NORTH 25-4HZ
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 25-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

Planned Survey

Measured			Vertical			Vertical	Dogleg	Build	Turn
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
7,900.00	89.80	269.86	6,960.44	899.06	901.28	-903.48	0.00	0.00	0.00
8,000.00	89.80	269.86	6,960.79	898.82	801.28	-803.48	0.00	0.00	0.00
8,100.00	89.80	269.86	6,961.14	898.58	701.28	-703.48	0.00	0.00	0.00
8,200.00	89.80	269.86	6,961.49	898.35	601.29	-603.48	0.00	0.00	0.00
8,300.00	89.80	269.86	6,961.83	898.11	501.29	-503.48	0.00	0.00	0.00
8,400.00	89.80	269.86	6,962.18	897.87	401.29	-403.48	0.00	0.00	0.00
8,500.00	89.80	269.86	6,962.53	897.64	301.29	-303.48	0.00	0.00	0.00
8,600.00	89.80	269.86	6,962.88	897.40	201.29	-203.48	0.00	0.00	0.00
8,700.00	89.80	269.86	6,963.22	897.16	101.29	-103.48	0.00	0.00	0.00
8,800.00	89.80	269.86	6,963.57	896.93	1.29	-3.48	0.00	0.00	0.00
8,900.00	89.80	269.86	6,963.92	896.69	-98.71	96.52	0.00	0.00	0.00
9,000.00	89.80	269.86	6,964.27	896.45	-198.71	196.52	0.00	0.00	0.00
9,100.00	89.80	269.86	6,964.61	896.22	-298.71	296.52	0.00	0.00	0.00
9,200.00	89.80	269.86	6,964.96	895.98	-398.71	396.52	0.00	0.00	0.00
9,300.00	89.80	269.86	6,965.31	895.74	-498.70	496.51	0.00	0.00	0.00
9,400.00	89.80	269.86	6,965.66	895.51	-598.70	596.51	0.00	0.00	0.00
9,500.00	89.80	269.86	6,966.00	895.27	-698.70	696.51	0.00	0.00	0.00
9,600.00	89.80	269.86	6,966.35	895.03	-798.70	796.51	0.00	0.00	0.00
9,700.00	89.80	269.86	6,966.70	894.80	-898.70	896.51	0.00	0.00	0.00
9,800.00	89.80	269.86	6,967.05	894.56	-998.70	996.51	0.00	0.00	0.00
9,900.00	89.80	269.86	6,967.39	894.32	-1,098.70	1,096.51	0.00	0.00	0.00
10,000.00	89.80	269.86	6,967.74	894.08	-1,198.70	1,196.51	0.00	0.00	0.00
10,100.00	89.80	269.86	6,968.09	893.85	-1,298.70	1,296.51	0.00	0.00	0.00
10,200.00	89.80	269.86	6,968.44	893.61	-1,398.70	1,396.51	0.00	0.00	0.00
10,300.00	89.80	269.86	6,968.79	893.37	-1,498.70	1,496.51	0.00	0.00	0.00
10,400.00	89.80	269.86	6,969.13	893.14	-1,598.70	1,596.51	0.00	0.00	0.00
10,500.00	89.80	269.86	6,969.48	892.90	-1,698.69	1,696.51	0.00	0.00	0.00
10,600.00	89.80	269.86	6,969.83	892.66	-1,798.69	1,796.51	0.00	0.00	0.00
10,700.00	89.80	269.86	6,970.18	892.43	-1,898.69	1,896.51	0.00	0.00	0.00
10,800.00	89.80	269.86	6,970.52	892.19	-1,998.69	1,996.51	0.00	0.00	0.00
10,900.00	89.80	269.86	6,970.87	891.95	-2,098.69	2,096.51	0.00	0.00	0.00
11,000.00	89.80	269.86	6,971.22	891.72	-2,198.69	2,196.50	0.00	0.00	0.00
11,100.00	89.80	269.86	6,971.57	891.48	-2,298.69	2,296.50	0.00	0.00	0.00
11,200.00	89.80	269.86	6,971.91	891.24	-2,398.69	2,396.50	0.00	0.00	0.00
11,300.00	89.80	269.86	6,972.26	891.01	-2,498.69	2,496.50	0.00	0.00	0.00
11,400.00	89.80	269.86	6,972.61	890.77	-2,598.69	2,596.50	0.00	0.00	0.00
11,500.00	89.80	269.86	6,972.96	890.53	-2,698.69	2,696.50	0.00	0.00	0.00
11,600.00	89.80	269.86	6,973.30	890.30	-2,798.68	2,796.50	0.00	0.00	0.00
11,700.00	89.80	269.86	6,973.65	890.06	-2,898.68	2,896.50	0.00	0.00	0.00
11,800.00	89.80	269.86	6,974.00	889.82	-2,998.68	2,996.50	0.00	0.00	0.00
11,900.00	89.80	269.86	6,974.35	889.59	-3,098.68	3,096.50	0.00	0.00	0.00
12,000.00	89.80	269.86	6,974.69	889.35	-3,198.68	3,196.50	0.00	0.00	0.00
12,100.00	89.80	269.86	6,975.04	889.11	-3,298.68	3,296.50	0.00	0.00	0.00
12,200.00	89.80	269.86	6,975.39	888.88	-3,398.68	3,396.50	0.00	0.00	0.00
12,300.00	89.80	269.86	6,975.74	888.64	-3,498.68	3,496.50	0.00	0.00	0.00
12,400.00	89.80	269.86	6,976.08	888.40	-3,598.68	3,596.50	0.00	0.00	0.00
12,500.00	89.80	269.86	6,976.43	888.17	-3,698.68	3,696.50	0.00	0.00	0.00
12,600.00	89.80	269.86	6,976.78	887.93	-3,798.68	3,796.49	0.00	0.00	0.00
12,663.28	89.80	269.86	6,977.00	887.78	-3,861.96	3,859.77	0.00	0.00	0.00

TD Well @ 12663.28ft

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well JODSTER NORTH 25-4HZ
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 25-4HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,526.50	1,500.00	9 5/8"	9-5/8	13-1/2	
7,772.97	6,960.00	Top of Production	5-1/2	7-7/8	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,357.64	1,340.00	Fox Hills				
3,574.50	3,342.00	Parkman				
4,128.09	3,837.00	Sussex				
7,163.39	6,714.00	Sharon Springs				
7,222.59	6,757.00	Niobrara				
7,390.48	6,859.00	Nio B				
7,605.79	6,940.00	Nio C				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
200.00	200.00	0.00	0.00	Begin Nudge @ 200.00ft	
1,973.33	1,910.31	185.75	359.11	Hold Tangent @ 1973.33ft	
4,773.33	4,413.95	761.74	1,472.69	Begin Drop @ 4773.33ft	
6,103.33	5,696.68	901.05	1,742.02	End Drop @ 6103.33ft	
6,650.46	6,243.81	901.05	1,742.02	KOP @ 6650.46ft :: DLS = 8°/100'	
7,772.97	6,960.00	899.36	1,028.31	End Build @ 7772.97ft	
12,663.28	6,977.00	887.78	-3,861.96	TD Well @ 12663.28ft	