

US ROCKIES WATTENBERG PLANNING

LARIMER-NAD83-UTMFT13N

5N-68W-25 JODSTER SOUTH 24-25HZ PAD

JODSTER SOUTH 25-6HZ

Plan A

Plan: Permit Rev-2

SHL Lat/Long: 40.371805/-104.947735

Survey Program: MWD+IFR

Standard Planning Report

30 December, 2018

Project: LARIMER-NAD83-UTMFT13N
Site: 5N-68W-25 JODSTER SOUTH 24-25HZ PAD
Well: JODSTER SOUTH 25-6HZ
Wellbore: Plan A
Design: Permit Rev-2

US ROCKIES WATTENBERG PLANNING

CASING DETAILS

TVD	MD	Size
1500.00	1521.21	9-5/8
7068.00	7883.73	5-1/2

WELL DETAILS: JODSTER SOUTH 25-6HZ

GL = 4861.00

RKB = 17' @ 4878.00usft (Drilling Rig)

SECTION DETAILS

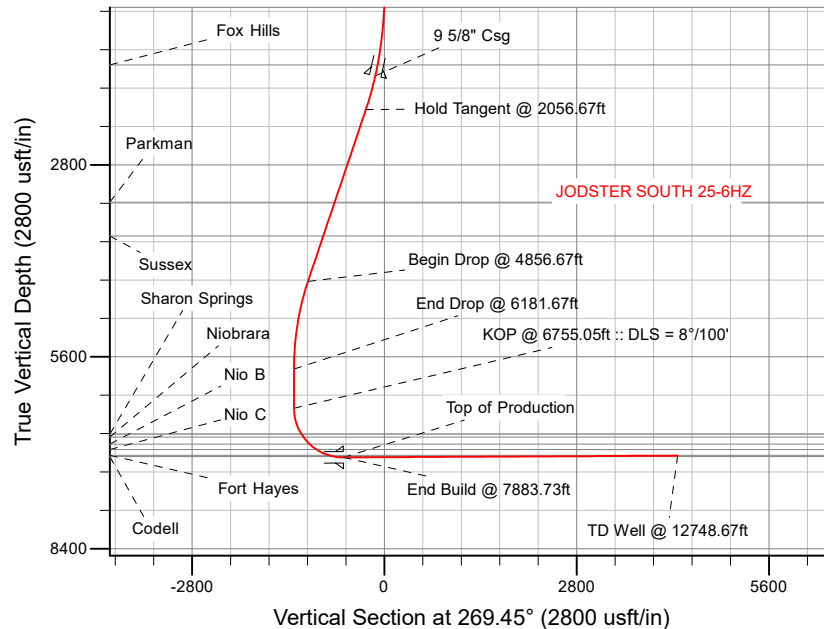
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	290.00	0.00	0.00	290.00	0.00	0.00	0.00	0.00	0.00	
3	2056.67	26.50	137.05	1994.35	-293.75	273.44	1.50	137.05	-270.61	
4	4856.67	26.50	137.05	4500.17	-1208.21	1124.70	0.00	0.00	-1113.05	
5	6181.67	0.00	0.00	5778.43	-1428.52	1329.79	2.00	180.00	-1316.01	
6	6755.05	0.00	0.00	6351.81	-1428.52	1329.79	0.00	0.00	-1316.01	
7	7883.73	90.29	269.45	7068.00	-1435.39	609.94	8.00	269.45	-596.14	
8	12748.67	90.29	269.45	7043.00	-1481.85	-4254.71	0.00	0.00	4268.74	JODSTER SOUTH 25-6HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
JODSTER SOUTH 25-6HZ_SHL	0.00	0.00	0.00	40.371805	-104.947735
JODSTER SOUTH 25-6HZ_BHL	7043.00	-1481.85	-4254.71	40.367735	-104.963010

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1340.00	1353.69	Fox Hills
3342.00	3562.53	Parkman
3837.00	4115.64	Sussex
6728.00	7151.12	Sharon Springs
6771.00	7202.85	Niobrara
6873.00	7338.74	Nio B
6952.00	7466.70	Nio C
7037.00	7668.53	Fort Hayes
7057.00	7754.31	Codell

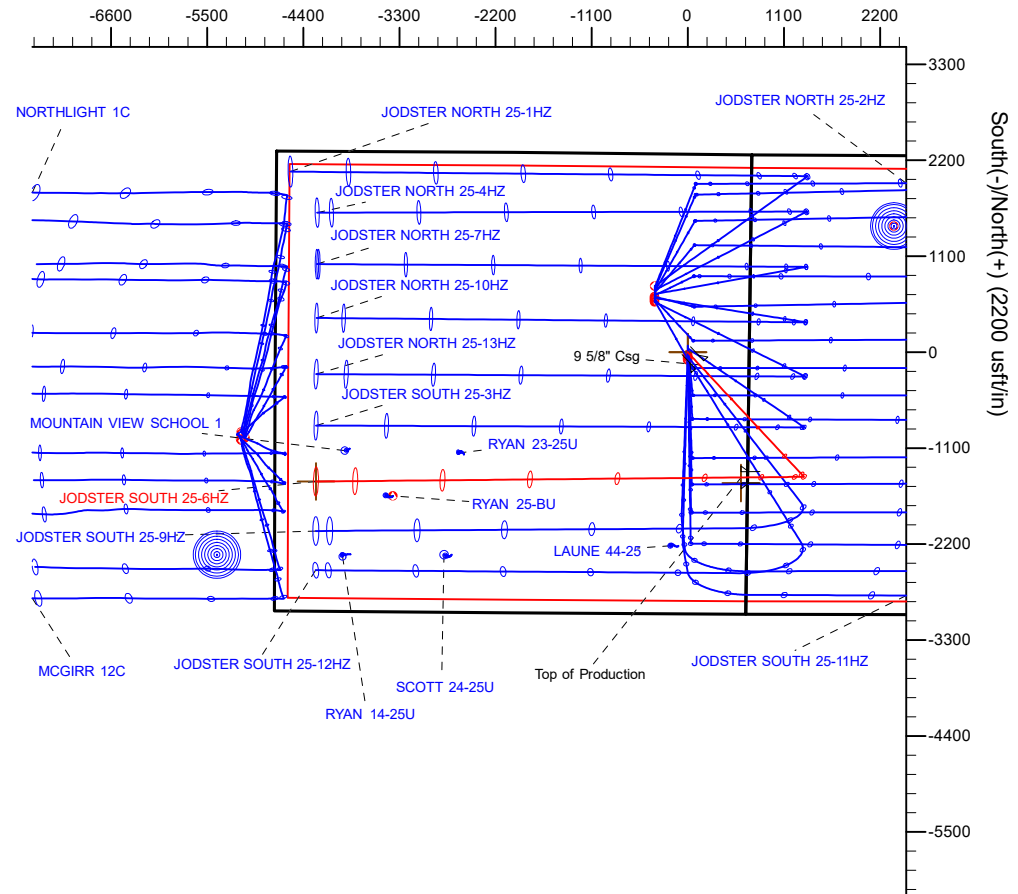


SHL
2272' FNL
704' FEL

HEEL
1570' FSL
75' FEL

TOE
1487' FSL
470' FWL

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



Plan: Permit Rev-2 (JODSTER SOUTH 25-6HZ/Plan A)

Date: 12/30/2018

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well JODSTER SOUTH 25-6HZ
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 SOUTH 24-25HZ PAD	North Reference:	True
Well:	JODSTER SOUTH 25-6HZ	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 SOUTH 24-25HZ PAD			
Site Position:		Northing:	14,662,206.38 usft	Latitude:	40.372011
From:	Lat/Long	Easting:	1,654,974.62 usft	Longitude:	-104.947732
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.03 °

Well	JODSTER SOUTH 25-6HZ					
Well Position	+N/-S	-75.02 usft	Northing:	14,662,131.36 usft	Latitude:	40.371805
	+E/-W	-0.84 usft	Easting:	1,654,973.83 usft	Longitude:	-104.947735
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	52,219.05930490

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	269.45

Plan Survey Tool Program	Date	12/30/2018		
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	12,748.67	Permit Rev-2 (Plan A)	APC_ISCWSA REV 2 MWD+I Fixed:v2:crustal field declinatio

Corporate
Planning Report

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Site:	5N-68W-25 JODSTER SOUTH 24-25HZ PAD	North Reference:	True
Well:	JODSTER SOUTH 25-6HZ	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	
290.00	0.00	0.00	290.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,056.67	26.50	137.05	1,994.35	-293.75	273.44	1.50	1.50	0.00	137.05	
4,856.67	26.50	137.05	4,500.17	-1,208.21	1,124.70	0.00	0.00	0.00	0.00	
6,181.67	0.00	0.00	5,778.43	-1,428.52	1,329.79	2.00	-2.00	0.00	180.00	
6,755.05	0.00	0.00	6,351.81	-1,428.52	1,329.79	0.00	0.00	0.00	0.00	
7,883.73	90.29	269.45	7,068.00	-1,435.39	609.94	8.00	8.00	-8.02	269.45	
12,748.67	90.29	269.45	7,043.00	-1,481.85	-4,254.71	0.00	0.00	0.00	0.00	JODSTER SOUTH 25

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 SOUTH 24-25HZ PAD	North Reference:	True
Well:	JODSTER SOUTH 25-6HZ	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
290.00	0.00	0.00	290.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 290.00ft									
300.00	0.15	137.05	300.00	-0.01	0.01	-0.01	1.50	1.50	0.00
400.00	1.65	137.05	399.98	-1.16	1.08	-1.07	1.50	1.50	0.00
500.00	3.15	137.05	499.89	-4.22	3.93	-3.89	1.50	1.50	0.00
600.00	4.65	137.05	599.66	-9.20	8.57	-8.48	1.50	1.50	0.00
700.00	6.15	137.05	699.21	-16.09	14.98	-14.82	1.50	1.50	0.00
800.00	7.65	137.05	798.49	-24.88	23.16	-22.92	1.50	1.50	0.00
900.00	9.15	137.05	897.41	-35.58	33.12	-32.77	1.50	1.50	0.00
1,000.00	10.65	137.05	995.92	-48.16	44.83	-44.37	1.50	1.50	0.00
1,100.00	12.15	137.05	1,093.94	-62.63	58.30	-57.69	1.50	1.50	0.00
1,200.00	13.65	137.05	1,191.42	-78.97	73.51	-72.75	1.50	1.50	0.00
1,300.00	15.15	137.05	1,288.27	-97.17	90.45	-89.52	1.50	1.50	0.00
1,353.69	15.96	137.05	1,340.00	-107.71	100.26	-99.22	1.50	1.50	0.00
Fox Hills									
1,400.00	16.65	137.05	1,384.44	-117.22	109.12	-107.99	1.50	1.50	0.00
1,500.00	18.15	137.05	1,479.86	-139.11	129.49	-128.15	1.50	1.50	0.00
1,521.21	18.47	137.05	1,500.00	-143.99	134.03	-132.65	1.50	1.50	0.00
9 5/8" Csg									
1,600.00	19.65	137.05	1,574.47	-162.82	151.56	-149.99	1.50	1.50	0.00
1,700.00	21.15	137.05	1,668.20	-188.33	175.31	-173.50	1.50	1.50	0.00
1,800.00	22.65	137.05	1,760.98	-215.63	200.73	-198.65	1.50	1.50	0.00
1,900.00	24.15	137.05	1,852.75	-244.70	227.79	-225.43	1.50	1.50	0.00
2,000.00	25.65	137.05	1,943.45	-275.52	256.47	-253.82	1.50	1.50	0.00
2,056.67	26.50	137.05	1,994.35	-293.75	273.44	-270.61	1.50	1.50	0.00
Hold Tangent @ 2056.67ft									
2,100.00	26.50	137.05	2,033.13	-307.90	286.62	-283.65	0.00	0.00	0.00
2,200.00	26.50	137.05	2,122.62	-340.56	317.02	-313.74	0.00	0.00	0.00
2,300.00	26.50	137.05	2,212.12	-373.22	347.42	-343.82	0.00	0.00	0.00
2,400.00	26.50	137.05	2,301.61	-405.88	377.82	-373.91	0.00	0.00	0.00
2,500.00	26.50	137.05	2,391.10	-438.54	408.23	-404.00	0.00	0.00	0.00
2,600.00	26.50	137.05	2,480.60	-471.20	438.63	-434.09	0.00	0.00	0.00
2,700.00	26.50	137.05	2,570.09	-503.86	469.03	-464.17	0.00	0.00	0.00
2,800.00	26.50	137.05	2,659.58	-536.51	499.43	-494.26	0.00	0.00	0.00
2,900.00	26.50	137.05	2,749.08	-569.17	529.84	-524.35	0.00	0.00	0.00
3,000.00	26.50	137.05	2,838.57	-601.83	560.24	-554.43	0.00	0.00	0.00
3,100.00	26.50	137.05	2,928.07	-634.49	590.64	-584.52	0.00	0.00	0.00
3,200.00	26.50	137.05	3,017.56	-667.15	621.04	-614.61	0.00	0.00	0.00
3,300.00	26.50	137.05	3,107.05	-699.81	651.44	-644.70	0.00	0.00	0.00
3,400.00	26.50	137.05	3,196.55	-732.47	681.85	-674.78	0.00	0.00	0.00
3,500.00	26.50	137.05	3,286.04	-765.13	712.25	-704.87	0.00	0.00	0.00
3,562.53	26.50	137.05	3,342.00	-785.55	731.26	-723.68	0.00	0.00	0.00
Parkman									
3,600.00	26.50	137.05	3,375.53	-797.79	742.65	-734.96	0.00	0.00	0.00
3,700.00	26.50	137.05	3,465.03	-830.45	773.05	-765.05	0.00	0.00	0.00
3,800.00	26.50	137.05	3,554.52	-863.11	803.45	-795.13	0.00	0.00	0.00
3,900.00	26.50	137.05	3,644.01	-895.77	833.86	-825.22	0.00	0.00	0.00
4,000.00	26.50	137.05	3,733.51	-928.43	864.26	-855.31	0.00	0.00	0.00
4,100.00	26.50	137.05	3,823.00	-961.09	894.66	-885.39	0.00	0.00	0.00
4,115.64	26.50	137.05	3,837.00	-966.20	899.42	-890.10	0.00	0.00	0.00

Corporate Planning Report

Database: PLANNING
Company: US ROCKIES WATTENBERG PLANNING
Project: LARIMER-NAD83-UTMFT13N
Site: 5N-68W-25 JODSTER SOUTH 24-25HZ PAD
Well: JODSTER SOUTH 25-6HZ
Wellbore: Plan A
Design: Permit Rev-2

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:
Well JODSTER SOUTH 25-6HZ
RKB = 17' @ 4878.00usft (Drilling Rig)
RKB = 17' @ 4878.00usft (Drilling Rig)
True
Minimum Curvature

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)
Sussex									
4,200.00	26.50	137.05	3,912.49	-993.75	925.06	-915.48	0.00	0.00	0.00
4,300.00	26.50	137.05	4,001.99	-1,026.41	955.47	-945.57	0.00	0.00	0.00
4,400.00	26.50	137.05	4,091.48	-1,059.06	985.87	-975.66	0.00	0.00	0.00
4,500.00	26.50	137.05	4,180.97	-1,091.72	1,016.27	-1,005.74	0.00	0.00	0.00
4,600.00	26.50	137.05	4,270.47	-1,124.38	1,046.67	-1,035.83	0.00	0.00	0.00
4,700.00	26.50	137.05	4,359.96	-1,157.04	1,077.07	-1,065.92	0.00	0.00	0.00
4,800.00	26.50	137.05	4,449.45	-1,189.70	1,107.48	-1,096.00	0.00	0.00	0.00
4,856.67	26.50	137.05	4,500.17	-1,208.21	1,124.70	-1,113.05	0.00	0.00	0.00
Begin Drop @ 4856.67ft									
4,900.00	25.63	137.05	4,539.09	-1,222.15	1,137.68	-1,125.89	2.00	-2.00	0.00
5,000.00	23.63	137.05	4,629.99	-1,252.65	1,166.08	-1,154.00	2.00	-2.00	0.00
5,100.00	21.63	137.05	4,722.28	-1,280.82	1,192.30	-1,179.95	2.00	-2.00	0.00
5,200.00	19.63	137.05	4,815.86	-1,306.61	1,216.30	-1,203.71	2.00	-2.00	0.00
5,300.00	17.63	137.05	4,910.61	-1,330.00	1,238.07	-1,225.25	2.00	-2.00	0.00
5,400.00	15.63	137.05	5,006.43	-1,350.95	1,257.58	-1,244.55	2.00	-2.00	0.00
5,500.00	13.63	137.05	5,103.18	-1,369.44	1,274.79	-1,261.58	2.00	-2.00	0.00
5,600.00	11.63	137.05	5,200.75	-1,385.45	1,289.69	-1,276.33	2.00	-2.00	0.00
5,700.00	9.63	137.05	5,299.03	-1,398.95	1,302.26	-1,288.77	2.00	-2.00	0.00
5,800.00	7.63	137.05	5,397.89	-1,409.94	1,312.49	-1,298.89	2.00	-2.00	0.00
5,900.00	5.63	137.05	5,497.22	-1,418.39	1,320.36	-1,306.68	2.00	-2.00	0.00
6,000.00	3.63	137.05	5,596.88	-1,424.30	1,325.86	-1,312.13	2.00	-2.00	0.00
6,100.00	1.63	137.05	5,696.77	-1,427.67	1,328.99	-1,315.23	2.00	-2.00	0.00
6,181.67	0.00	0.00	5,778.43	-1,428.52	1,329.79	-1,316.01	2.00	-2.00	0.00
End Drop @ 6181.67ft									
6,200.00	0.00	0.00	5,796.76	-1,428.52	1,329.79	-1,316.01	0.00	0.00	0.00
6,300.00	0.00	0.00	5,896.76	-1,428.52	1,329.79	-1,316.01	0.00	0.00	0.00
6,400.00	0.00	0.00	5,996.76	-1,428.52	1,329.79	-1,316.01	0.00	0.00	0.00
6,500.00	0.00	0.00	6,096.76	-1,428.52	1,329.79	-1,316.01	0.00	0.00	0.00
6,600.00	0.00	0.00	6,196.76	-1,428.52	1,329.79	-1,316.01	0.00	0.00	0.00
6,700.00	0.00	0.00	6,296.76	-1,428.52	1,329.79	-1,316.01	0.00	0.00	0.00
6,755.05	0.00	0.00	6,351.81	-1,428.52	1,329.79	-1,316.01	0.00	0.00	0.00
KOP @ 6755.05ft :: DLS = 8°/100'									
6,800.00	3.60	269.45	6,396.73	-1,428.53	1,328.38	-1,314.60	8.00	8.00	0.00
6,900.00	11.60	269.45	6,495.77	-1,428.66	1,315.17	-1,301.39	8.00	8.00	0.00
7,000.00	19.60	269.45	6,592.01	-1,428.92	1,288.31	-1,274.53	8.00	8.00	0.00
7,100.00	27.60	269.45	6,683.58	-1,429.30	1,248.31	-1,234.54	8.00	8.00	0.00
7,151.12	31.69	269.45	6,728.00	-1,429.54	1,223.04	-1,209.26	8.00	8.00	0.00
Sharon Springs									
7,200.00	35.60	269.45	6,768.69	-1,429.80	1,195.97	-1,182.19	8.00	8.00	0.00
7,202.85	35.82	269.45	6,771.00	-1,429.81	1,194.30	-1,180.52	8.00	8.00	0.00
Niobrara									
7,300.00	43.60	269.45	6,845.68	-1,430.41	1,132.28	-1,118.50	8.00	8.00	0.00
7,338.74	46.70	269.45	6,873.00	-1,430.67	1,104.82	-1,091.04	8.00	8.00	0.00
Nio B									
7,400.00	51.60	269.45	6,913.06	-1,431.11	1,058.51	-1,044.72	8.00	8.00	0.00
7,466.70	56.93	269.45	6,952.00	-1,431.63	1,004.39	-990.60	8.00	8.00	0.00
Nio C									
7,500.00	59.60	269.45	6,969.52	-1,431.90	976.07	-962.28	8.00	8.00	0.00
7,600.00	67.60	269.45	7,013.95	-1,432.75	886.58	-872.78	8.00	8.00	0.00
7,668.53	73.08	269.45	7,037.00	-1,433.37	822.07	-808.28	8.00	8.00	0.00
Fort Hayes									
7,700.00	75.60	269.45	7,045.50	-1,433.66	791.77	-777.98	8.00	8.00	0.00

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 SOUTH 24-25HZ PAD	North Reference:	True
Well:	JODSTER SOUTH 25-6HZ	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)
7,754.31	79.94	269.45	7,057.00	-1,434.16	738.71	-724.91	8.00	8.00	0.00
Codell									
7,800.00	83.60	269.45	7,063.54	-1,434.60	693.50	-679.70	8.00	8.00	0.00
7,883.73	90.29	269.45	7,068.00	-1,435.39	609.94	-596.14	8.00	8.00	0.00
End Build @ 7883.73ft - Top of Production									
7,900.00	90.29	269.45	7,067.92	-1,435.55	593.67	-579.87	0.00	0.00	0.00
8,000.00	90.29	269.45	7,067.40	-1,436.50	493.68	-479.87	0.00	0.00	0.00
8,100.00	90.29	269.45	7,066.89	-1,437.46	393.69	-379.87	0.00	0.00	0.00
8,200.00	90.29	269.45	7,066.37	-1,438.41	293.69	-279.87	0.00	0.00	0.00
8,300.00	90.29	269.45	7,065.86	-1,439.37	193.70	-179.87	0.00	0.00	0.00
8,400.00	90.29	269.45	7,065.35	-1,440.32	93.70	-79.87	0.00	0.00	0.00
8,500.00	90.29	269.45	7,064.83	-1,441.28	-6.29	20.13	0.00	0.00	0.00
8,600.00	90.29	269.45	7,064.32	-1,442.23	-106.29	120.12	0.00	0.00	0.00
8,700.00	90.29	269.45	7,063.81	-1,443.19	-206.28	220.12	0.00	0.00	0.00
8,800.00	90.29	269.45	7,063.29	-1,444.14	-306.27	320.12	0.00	0.00	0.00
8,900.00	90.29	269.45	7,062.78	-1,445.10	-406.27	420.12	0.00	0.00	0.00
9,000.00	90.29	269.45	7,062.26	-1,446.05	-506.26	520.12	0.00	0.00	0.00
9,100.00	90.29	269.45	7,061.75	-1,447.01	-606.26	620.12	0.00	0.00	0.00
9,200.00	90.29	269.45	7,061.24	-1,447.96	-706.25	720.12	0.00	0.00	0.00
9,300.00	90.29	269.45	7,060.72	-1,448.92	-806.24	820.12	0.00	0.00	0.00
9,400.00	90.29	269.45	7,060.21	-1,449.87	-906.24	920.11	0.00	0.00	0.00
9,500.00	90.29	269.45	7,059.69	-1,450.83	-1,006.23	1,020.11	0.00	0.00	0.00
9,600.00	90.29	269.45	7,059.18	-1,451.78	-1,106.23	1,120.11	0.00	0.00	0.00
9,700.00	90.29	269.45	7,058.67	-1,452.74	-1,206.22	1,220.11	0.00	0.00	0.00
9,800.00	90.29	269.45	7,058.15	-1,453.69	-1,306.21	1,320.11	0.00	0.00	0.00
9,900.00	90.29	269.45	7,057.64	-1,454.65	-1,406.21	1,420.11	0.00	0.00	0.00
10,000.00	90.29	269.45	7,057.13	-1,455.60	-1,506.20	1,520.11	0.00	0.00	0.00
10,100.00	90.29	269.45	7,056.61	-1,456.56	-1,606.20	1,620.10	0.00	0.00	0.00
10,200.00	90.29	269.45	7,056.10	-1,457.51	-1,706.19	1,720.10	0.00	0.00	0.00
10,300.00	90.29	269.45	7,055.58	-1,458.46	-1,806.19	1,820.10	0.00	0.00	0.00
10,400.00	90.29	269.45	7,055.07	-1,459.42	-1,906.18	1,920.10	0.00	0.00	0.00
10,500.00	90.29	269.45	7,054.56	-1,460.37	-2,006.17	2,020.10	0.00	0.00	0.00
10,600.00	90.29	269.45	7,054.04	-1,461.33	-2,106.17	2,120.10	0.00	0.00	0.00
10,700.00	90.29	269.45	7,053.53	-1,462.28	-2,206.16	2,220.10	0.00	0.00	0.00
10,800.00	90.29	269.45	7,053.01	-1,463.24	-2,306.16	2,320.10	0.00	0.00	0.00
10,900.00	90.29	269.45	7,052.50	-1,464.19	-2,406.15	2,420.09	0.00	0.00	0.00
11,000.00	90.29	269.45	7,051.99	-1,465.15	-2,506.14	2,520.09	0.00	0.00	0.00
11,100.00	90.29	269.45	7,051.47	-1,466.10	-2,606.14	2,620.09	0.00	0.00	0.00
11,200.00	90.29	269.45	7,050.96	-1,467.06	-2,706.13	2,720.09	0.00	0.00	0.00
11,300.00	90.29	269.45	7,050.44	-1,468.01	-2,806.13	2,820.09	0.00	0.00	0.00
11,400.00	90.29	269.45	7,049.93	-1,468.97	-2,906.12	2,920.09	0.00	0.00	0.00
11,500.00	90.29	269.45	7,049.42	-1,469.92	-3,006.12	3,020.09	0.00	0.00	0.00
11,600.00	90.29	269.45	7,048.90	-1,470.88	-3,106.11	3,120.09	0.00	0.00	0.00
11,700.00	90.29	269.45	7,048.39	-1,471.83	-3,206.10	3,220.08	0.00	0.00	0.00
11,800.00	90.29	269.45	7,047.88	-1,472.79	-3,306.10	3,320.08	0.00	0.00	0.00
11,900.00	90.29	269.45	7,047.36	-1,473.74	-3,406.09	3,420.08	0.00	0.00	0.00
12,000.00	90.29	269.45	7,046.85	-1,474.70	-3,506.09	3,520.08	0.00	0.00	0.00
12,100.00	90.29	269.45	7,046.33	-1,475.65	-3,606.08	3,620.08	0.00	0.00	0.00
12,200.00	90.29	269.45	7,045.82	-1,476.61	-3,706.07	3,720.08	0.00	0.00	0.00
12,300.00	90.29	269.45	7,045.31	-1,477.56	-3,806.07	3,820.08	0.00	0.00	0.00
12,400.00	90.29	269.45	7,044.79	-1,478.52	-3,906.06	3,920.07	0.00	0.00	0.00
12,500.00	90.29	269.45	7,044.28	-1,479.47	-4,006.06	4,020.07	0.00	0.00	0.00
12,600.00	90.29	269.45	7,043.76	-1,480.43	-4,106.05	4,120.07	0.00	0.00	0.00
12,700.00	90.29	269.45	7,043.25	-1,481.38	-4,206.04	4,220.07	0.00	0.00	0.00

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well JODSTER SOUTH 25-6HZ
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 SOUTH 24-25HZ PAD	North Reference:	True
Well:	JODSTER SOUTH 25-6HZ	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)
12,748.67	90.29	269.45	7,043.00	-1,481.85	-4,254.71	4,268.74	0.00	0.00	0.00
TD Well @ 12748.67ft									

Casing Points				
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,521.21	1,500.00	9 5/8" Csg	9-5/8	13-1/2
7,883.73	7,068.00	Top of Production	5-1/2	7-7/8

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,353.69	1,340.00	Fox Hills			
3,562.53	3,342.00	Parkman			
4,115.64	3,837.00	Sussex			
7,151.12	6,728.00	Sharon Springs			
7,202.85	6,771.00	Niobrara			
7,338.74	6,873.00	Nio B			
7,466.70	6,952.00	Nio C			
7,668.53	7,037.00	Fort Hayes			
7,754.31	7,057.00	Codell			

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
290.00	290.00	0.00	0.00	Begin Nudge @ 290.00ft
2,056.67	1,994.35	-293.75	273.44	Hold Tangent @ 2056.67ft
4,856.67	4,500.17	-1,208.21	1,124.70	Begin Drop @ 4856.67ft
6,181.67	5,778.43	-1,428.52	1,329.79	End Drop @ 6181.67ft
6,755.05	6,351.81	-1,428.52	1,329.79	KOP @ 6755.05ft :: DLS = 8°/100'
7,883.73	7,068.00	-1,435.39	609.94	End Build @ 7883.73ft
12,748.67	7,043.00	-1,481.85	-4,254.71	TD Well @ 12748.67ft