

US ROCKIES WATTENBERG PLANNING

WELD-NAD83-UTMFT13N

2N-68W-35 NELSON 28-35HZ PAD

NELSON 35-17HZ

Plan B

Plan: Permit Rev-1

SHL Lat/Long: 40.101355/-104.972495

Survey Program: MWD+IFR+MSA

Standard Planning Report

22 December, 2019

Project: WELD-NAD83-UTMFT13N
Site: 2N-68W-35 NELSON 28-35HZ PAD
Well: NELSON 35-17HZ
Wellbore: Plan B
Design: Permit Rev-1

US ROCKIES WATTENBERG PLANNING

CASING DETAILS

TVD	MD	Name	Size
1500.00	1509.81	9 5/8" Csg	9-5/8
7621.00	8075.33	Top of Production	5-1/2

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	420.00	0.00	0.00	420.00	0.00	0.00	0.00	0.00	0.00	
3	1086.67	10.00	228.00	1083.29	-38.83	-43.12	1.50	228.00	-38.75	
4	3380.00	10.00	228.00	3341.78	-305.30	-339.07	0.00	0.00	-304.71	
5	3880.00	0.00	0.00	3839.25	-334.42	-371.41	2.00	180.00	-333.77	
6	6945.57	0.00	0.00	6904.82	-334.42	-371.41	0.00	0.00	-333.77	
7	8075.33	90.38	357.59	7621.00	385.90	-401.68	8.00	357.59	386.60	
8	12204.32	90.38	357.59	7593.54	4511.16	-575.00	0.00	0.00	4512.16	NELSON 35-17HZ_target
9	12552.35	90.38	2.81	7591.22	4859.06	-573.76	1.50	89.98	4860.05	
10	16347.64	90.38	2.81	7566.00	8649.68	-387.39	0.00	0.00	8650.34	NELSON 35-17HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
NELSON 35-17HZ_SHL	0.00	0.00	0.00	40.101355	-104.972495
NELSON 35-17HZ_BHL	7566.00	8649.68	-387.39	40.125108	-104.973881

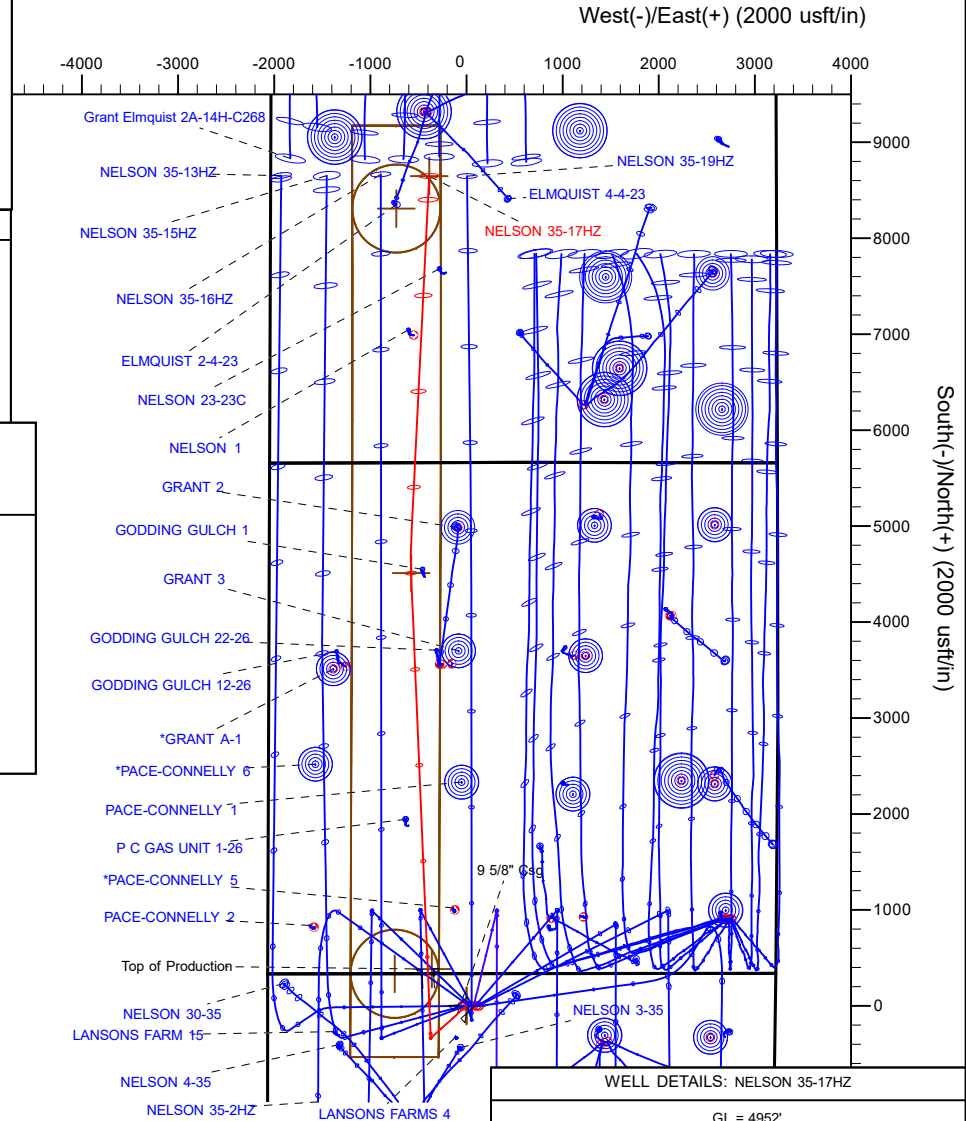
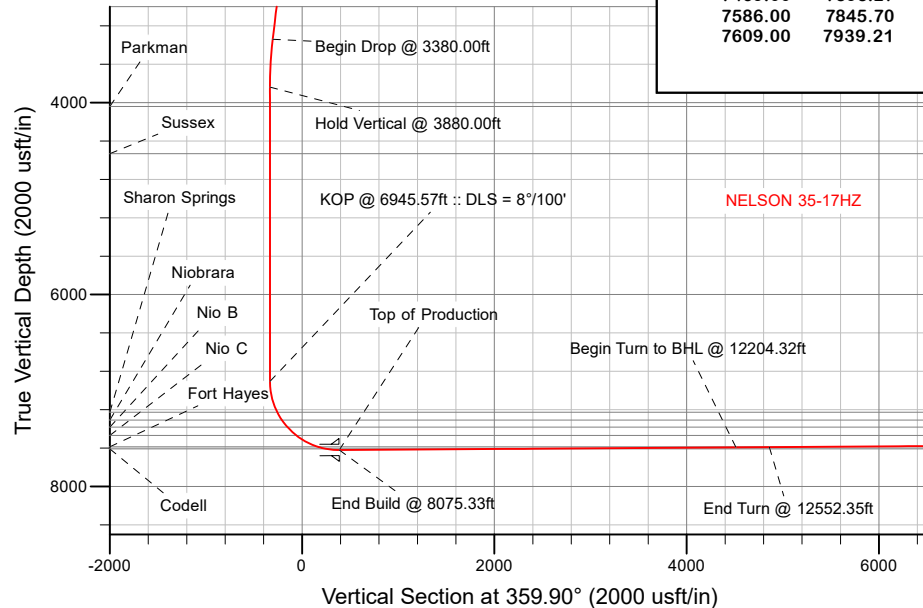
FORMATION TOP DETAILS

TVDPath	MDPath	Formation
980.00	982.03	Fox Hills
4040.00	4080.75	Parkman
4532.00	4572.75	Sussex
7227.00	7279.75	Sharon Springs
7309.00	7375.03	Niobrara
7382.00	7467.82	Nio B
7469.00	7595.27	Nio C
7586.00	7845.70	Fort Hayes
7609.00	7939.21	Codell

SHL
336 FNL
2069' FWL

HEEL
50' FSL
1664' FWL

BHL
2311' FNL
1649' FWL



WELL DETAILS: NELSON 35-17HZ

GL = 4952'

RKB = 17" @ 4969.00usft (Drilling Rig)

Plan: Permit Rev-1 (NELSON 35-17HZ/Plan B)

Date: 12/22/2019

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well NELSON 35-17HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4969.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4969.00usft (Drilling Rig)
Site:	2N-68W-35 NELSON 28-35HZ PAD	North Reference:	True
Well:	NELSON 35-17HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
Design:	Permit Rev-1		

Project	WELD-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	2N-68W-35 NELSON 28-35HZ PAD			
Site Position:		Northing:	14,563,661.77 usft	Latitude: 40.101408
From:	Lat/Long	Easting:	1,648,208.17 usft	Longitude: -104.972137
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.02 °

Well	NELSON 35-17HZ			
Well Position	+N/-S	-19.30 usft	Northing:	14,563,642.43 usft
	+E/-W	-100.11 usft	Easting:	1,648,108.06 usft
Position Uncertainty		3.28 usft	Wellhead Elevation:	Ground Level: 4,952.00 usft

Wellbore	Plan B				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	1/15/2019	8.13	66.54	52,033.89726910

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	359.90

Plan Survey Tool Program	Date	12/22/2019		
Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	1,500.00	Permit Rev-1 (Plan B)	APC_ISCWSA REV 2 MWD+II Fixed:v2:crustal field declinatio
2	1,500.00	16,347.64	Permit Rev-1 (Plan B)	APC_ISCWSA REV 2 MWD+II Fixed:v2:Rockies, crustal dec +

Corporate
Planning Report

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Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4969.00usft (Drilling Rig)
Site:	2N-68W-35 NELSON 28-35HZ PAD	North Reference:	True
Well:	NELSON 35-17HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
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	
420.00	0.00	0.00	420.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,086.67	10.00	228.00	1,083.29	-38.83	-43.12	1.50	1.50	0.00	228.00	
3,380.00	10.00	228.00	3,341.78	-305.30	-339.07	0.00	0.00	0.00	0.00	
3,880.00	0.00	0.00	3,839.25	-334.42	-371.41	2.00	-2.00	0.00	180.00	
6,945.57	0.00	0.00	6,904.82	-334.42	-371.41	0.00	0.00	0.00	0.00	
8,075.33	90.38	357.59	7,621.00	385.90	-401.68	8.00	8.00	-0.21	357.59	
12,204.32	90.38	357.59	7,593.54	4,511.16	-575.00	0.00	0.00	0.00	0.00	NELSON 35-17HZ_ta
12,552.35	90.38	2.81	7,591.22	4,859.06	-573.76	1.50	0.00	1.50	89.98	
16,347.64	90.38	2.81	7,566.00	8,649.68	-387.39	0.00	0.00	0.00	0.00	NELSON 35-17HZ_BI

Corporate Planning Report

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Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4969.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4969.00usft (Drilling Rig)
Site:	2N-68W-35 NELSON 28-35HZ PAD	North Reference:	True
Well:	NELSON 35-17HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
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
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
420.00	0.00	0.00	420.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 420.00ft									
500.00	1.20	228.00	499.99	-0.56	-0.62	-0.56	1.50	1.50	0.00
600.00	2.70	228.00	599.93	-2.84	-3.15	-2.83	1.50	1.50	0.00
700.00	4.20	228.00	699.75	-6.86	-7.62	-6.85	1.50	1.50	0.00
800.00	5.70	228.00	799.37	-12.64	-14.04	-12.61	1.50	1.50	0.00
900.00	7.20	228.00	898.74	-20.15	-22.38	-20.11	1.50	1.50	0.00
982.03	8.43	228.00	980.00	-27.62	-30.67	-27.56	1.50	1.50	0.00
Fox Hills									
1,000.00	8.70	228.00	997.77	-29.41	-32.66	-29.35	1.50	1.50	0.00
1,086.67	10.00	228.00	1,083.29	-38.83	-43.12	-38.75	1.50	1.50	0.00
Hold Tangent @ 1086.67ft									
1,100.00	10.00	228.00	1,096.42	-40.38	-44.85	-40.30	0.00	0.00	0.00
1,200.00	10.00	228.00	1,194.90	-52.00	-57.75	-51.90	0.00	0.00	0.00
1,300.00	10.00	228.00	1,293.38	-63.62	-70.65	-63.49	0.00	0.00	0.00
1,400.00	10.00	228.00	1,391.86	-75.24	-83.56	-75.09	0.00	0.00	0.00
1,500.00	10.00	228.00	1,490.34	-86.86	-96.46	-86.69	0.00	0.00	0.00
1,509.81	10.00	228.00	1,500.00	-88.00	-97.73	-87.83	0.00	0.00	0.00
9 5/8" Csg									
1,600.00	10.00	228.00	1,588.82	-98.48	-109.37	-98.28	0.00	0.00	0.00
1,700.00	10.00	228.00	1,687.30	-110.09	-122.27	-109.88	0.00	0.00	0.00
1,800.00	10.00	228.00	1,785.78	-121.71	-135.18	-121.48	0.00	0.00	0.00
1,900.00	10.00	228.00	1,884.26	-133.33	-148.08	-133.07	0.00	0.00	0.00
2,000.00	10.00	228.00	1,982.74	-144.95	-160.99	-144.67	0.00	0.00	0.00
2,100.00	10.00	228.00	2,081.23	-156.57	-173.89	-156.27	0.00	0.00	0.00
2,200.00	10.00	228.00	2,179.71	-168.19	-186.80	-167.87	0.00	0.00	0.00
2,300.00	10.00	228.00	2,278.19	-179.81	-199.70	-179.46	0.00	0.00	0.00
2,400.00	10.00	228.00	2,376.67	-191.43	-212.60	-191.06	0.00	0.00	0.00
2,500.00	10.00	228.00	2,475.15	-203.05	-225.51	-202.66	0.00	0.00	0.00
2,600.00	10.00	228.00	2,573.63	-214.67	-238.41	-214.25	0.00	0.00	0.00
2,700.00	10.00	228.00	2,672.11	-226.29	-251.32	-225.85	0.00	0.00	0.00
2,800.00	10.00	228.00	2,770.59	-237.91	-264.22	-237.45	0.00	0.00	0.00
2,900.00	10.00	228.00	2,869.07	-249.53	-277.13	-249.04	0.00	0.00	0.00
3,000.00	10.00	228.00	2,967.55	-261.15	-290.03	-260.64	0.00	0.00	0.00
3,100.00	10.00	228.00	3,066.03	-272.77	-302.94	-272.24	0.00	0.00	0.00
3,200.00	10.00	228.00	3,164.51	-284.38	-315.84	-283.83	0.00	0.00	0.00
3,300.00	10.00	228.00	3,263.00	-296.00	-328.75	-295.43	0.00	0.00	0.00
3,380.00	10.00	228.00	3,341.78	-305.30	-339.07	-304.71	0.00	0.00	0.00
Begin Drop @ 3380.00ft									
3,400.00	9.60	228.00	3,361.49	-307.58	-341.60	-306.98	2.00	-2.00	0.00
3,500.00	7.60	228.00	3,460.36	-317.58	-352.71	-316.97	2.00	-2.00	0.00
3,600.00	5.60	228.00	3,559.69	-325.27	-361.25	-324.64	2.00	-2.00	0.00
3,700.00	3.60	228.00	3,659.36	-330.64	-367.21	-330.00	2.00	-2.00	0.00
3,800.00	1.60	228.00	3,759.26	-333.67	-370.58	-333.03	2.00	-2.00	0.00
3,880.00	0.00	0.00	3,839.25	-334.42	-371.41	-333.77	2.00	-2.00	0.00
Hold Vertical @ 3880.00ft									
3,900.00	0.00	0.00	3,859.25	-334.42	-371.41	-333.77	0.00	0.00	0.00
4,000.00	0.00	0.00	3,959.25	-334.42	-371.41	-333.77	0.00	0.00	0.00

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well NELSON 35-17HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4969.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4969.00usft (Drilling Rig)
Site:	2N-68W-35 NELSON 28-35HZ PAD	North Reference:	True
Well:	NELSON 35-17HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
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)	
4,080.76	0.00	0.00	4,040.00	-334.42	-371.41	-333.77	0.00	0.00	0.00	
Parkman										
4,100.00	0.00	0.00	4,059.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
4,200.00	0.00	0.00	4,159.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
4,300.00	0.00	0.00	4,259.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
4,400.00	0.00	0.00	4,359.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
4,500.00	0.00	0.00	4,459.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
4,572.76	0.00	0.00	4,532.00	-334.42	-371.41	-333.77	0.00	0.00	0.00	
Sussex										
4,600.00	0.00	0.00	4,559.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
4,700.00	0.00	0.00	4,659.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
4,800.00	0.00	0.00	4,759.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
4,900.00	0.00	0.00	4,859.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
5,000.00	0.00	0.00	4,959.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
5,100.00	0.00	0.00	5,059.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
5,200.00	0.00	0.00	5,159.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
5,300.00	0.00	0.00	5,259.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
5,400.00	0.00	0.00	5,359.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
5,500.00	0.00	0.00	5,459.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
5,600.00	0.00	0.00	5,559.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
5,700.00	0.00	0.00	5,659.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
5,800.00	0.00	0.00	5,759.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
5,900.00	0.00	0.00	5,859.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
6,000.00	0.00	0.00	5,959.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
6,100.00	0.00	0.00	6,059.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
6,200.00	0.00	0.00	6,159.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
6,300.00	0.00	0.00	6,259.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
6,400.00	0.00	0.00	6,359.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
6,500.00	0.00	0.00	6,459.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,559.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
6,700.00	0.00	0.00	6,659.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
6,800.00	0.00	0.00	6,759.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
6,900.00	0.00	0.00	6,859.25	-334.42	-371.41	-333.77	0.00	0.00	0.00	
6,945.57	0.00	0.00	6,904.82	-334.42	-371.41	-333.77	0.00	0.00	0.00	
KOP @ 6945.57ft :: DLS = 8°/100'										
7,000.00	4.35	357.59	6,959.19	-332.36	-371.50	-331.71	8.00	8.00	0.00	
7,100.00	12.35	357.59	7,058.05	-317.85	-372.11	-317.20	8.00	8.00	0.00	
7,200.00	20.35	357.59	7,153.93	-289.74	-373.29	-289.09	8.00	8.00	0.00	
7,279.75	26.73	357.59	7,227.00	-257.93	-374.63	-257.27	8.00	8.00	0.00	
Sharon Springs										
7,300.00	28.35	357.59	7,244.95	-248.57	-375.02	-247.92	8.00	8.00	0.00	
7,375.03	34.36	357.59	7,309.00	-209.58	-376.66	-208.92	8.00	8.00	0.00	
Niobrara										
7,400.00	36.35	357.59	7,329.36	-195.15	-377.26	-194.49	8.00	8.00	0.00	
7,467.82	41.78	357.59	7,382.00	-152.46	-379.06	-151.80	8.00	8.00	0.00	
Nio B										
7,500.00	44.35	357.59	7,405.50	-130.51	-379.98	-129.84	8.00	8.00	0.00	
7,595.27	51.98	357.59	7,469.00	-59.64	-382.96	-58.97	8.00	8.00	0.00	
Nio C										
7,600.00	52.35	357.59	7,471.90	-55.91	-383.12	-55.24	8.00	8.00	0.00	
7,700.00	60.35	357.59	7,527.26	27.20	-386.61	27.88	8.00	8.00	0.00	
7,800.00	68.35	357.59	7,570.51	117.20	-390.39	117.88	8.00	8.00	0.00	
7,845.70	72.01	357.59	7,586.00	160.15	-392.19	160.83	8.00	8.00	0.00	

Corporate Planning Report

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Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4969.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4969.00usft (Drilling Rig)
Site:	2N-68W-35 NELSON 28-35HZ PAD	North Reference:	True
Well:	NELSON 35-17HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
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)
Fort Hayes									
7,900.00	76.35	357.59	7,600.80	212.33	-394.39	213.02	8.00	8.00	0.00
7,939.21	79.49	357.59	7,609.00	250.64	-395.99	251.33	8.00	8.00	0.00
Codell									
8,000.00	84.35	357.59	7,617.54	310.75	-398.52	311.45	8.00	8.00	0.00
8,075.33	90.38	357.59	7,621.00	385.90	-401.68	386.60	8.00	8.00	0.00
End Build @ 8075.33ft - Top of Production									
8,100.00	90.38	357.59	7,620.83	410.55	-402.71	411.25	0.00	0.00	0.00
8,200.00	90.38	357.59	7,620.17	510.46	-406.91	511.17	0.00	0.00	0.00
8,300.00	90.38	357.59	7,619.50	610.37	-411.11	611.08	0.00	0.00	0.00
8,400.00	90.38	357.59	7,618.84	710.28	-415.31	711.00	0.00	0.00	0.00
8,500.00	90.38	357.59	7,618.17	810.19	-419.50	810.92	0.00	0.00	0.00
8,600.00	90.38	357.59	7,617.51	910.10	-423.70	910.83	0.00	0.00	0.00
8,700.00	90.38	357.59	7,616.84	1,010.01	-427.90	1,010.75	0.00	0.00	0.00
8,800.00	90.38	357.59	7,616.18	1,109.91	-432.10	1,110.67	0.00	0.00	0.00
8,900.00	90.38	357.59	7,615.51	1,209.82	-436.29	1,210.58	0.00	0.00	0.00
9,000.00	90.38	357.59	7,614.85	1,309.73	-440.49	1,310.50	0.00	0.00	0.00
9,100.00	90.38	357.59	7,614.18	1,409.64	-444.69	1,410.42	0.00	0.00	0.00
9,200.00	90.38	357.59	7,613.52	1,509.55	-448.89	1,510.33	0.00	0.00	0.00
9,300.00	90.38	357.59	7,612.85	1,609.46	-453.09	1,610.25	0.00	0.00	0.00
9,400.00	90.38	357.59	7,612.19	1,709.37	-457.28	1,710.17	0.00	0.00	0.00
9,500.00	90.38	357.59	7,611.52	1,809.28	-461.48	1,810.09	0.00	0.00	0.00
9,600.00	90.38	357.59	7,610.86	1,909.19	-465.68	1,910.00	0.00	0.00	0.00
9,700.00	90.38	357.59	7,610.19	2,009.10	-469.88	2,009.92	0.00	0.00	0.00
9,800.00	90.38	357.59	7,609.53	2,109.01	-474.07	2,109.84	0.00	0.00	0.00
9,900.00	90.38	357.59	7,608.86	2,208.92	-478.27	2,209.75	0.00	0.00	0.00
10,000.00	90.38	357.59	7,608.20	2,308.83	-482.47	2,309.67	0.00	0.00	0.00
10,100.00	90.38	357.59	7,607.53	2,408.74	-486.67	2,409.59	0.00	0.00	0.00
10,200.00	90.38	357.59	7,606.87	2,508.65	-490.86	2,509.50	0.00	0.00	0.00
10,300.00	90.38	357.59	7,606.20	2,608.56	-495.06	2,609.42	0.00	0.00	0.00
10,400.00	90.38	357.59	7,605.54	2,708.47	-499.26	2,709.34	0.00	0.00	0.00
10,500.00	90.38	357.59	7,604.87	2,808.38	-503.46	2,809.25	0.00	0.00	0.00
10,600.00	90.38	357.59	7,604.21	2,908.29	-507.66	2,909.17	0.00	0.00	0.00
10,700.00	90.38	357.59	7,603.54	3,008.20	-511.85	3,009.09	0.00	0.00	0.00
10,800.00	90.38	357.59	7,602.88	3,108.11	-516.05	3,109.00	0.00	0.00	0.00
10,900.00	90.38	357.59	7,602.21	3,208.02	-520.25	3,208.92	0.00	0.00	0.00
11,000.00	90.38	357.59	7,601.55	3,307.93	-524.45	3,308.84	0.00	0.00	0.00
11,100.00	90.38	357.59	7,600.88	3,407.84	-528.64	3,408.75	0.00	0.00	0.00
11,200.00	90.38	357.59	7,600.22	3,507.75	-532.84	3,508.67	0.00	0.00	0.00
11,300.00	90.38	357.59	7,599.55	3,607.66	-537.04	3,608.59	0.00	0.00	0.00
11,400.00	90.38	357.59	7,598.89	3,707.57	-541.24	3,708.50	0.00	0.00	0.00
11,500.00	90.38	357.59	7,598.22	3,807.48	-545.43	3,808.42	0.00	0.00	0.00
11,600.00	90.38	357.59	7,597.56	3,907.39	-549.63	3,908.34	0.00	0.00	0.00
11,700.00	90.38	357.59	7,596.89	4,007.29	-553.83	4,008.26	0.00	0.00	0.00
11,800.00	90.38	357.59	7,596.23	4,107.20	-558.03	4,108.17	0.00	0.00	0.00
11,900.00	90.38	357.59	7,595.56	4,207.11	-562.23	4,208.09	0.00	0.00	0.00
12,000.00	90.38	357.59	7,594.90	4,307.02	-566.42	4,308.01	0.00	0.00	0.00
12,100.00	90.38	357.59	7,594.23	4,406.93	-570.62	4,407.92	0.00	0.00	0.00
12,200.00	90.38	357.59	7,593.57	4,506.84	-574.82	4,507.84	0.00	0.00	0.00
12,204.32	90.38	357.59	7,593.54	4,511.16	-575.00	4,512.16	0.00	0.00	0.00
Begin Turn to BHL @ 12204.32ft									
12,300.00	90.38	359.03	7,592.90	4,606.79	-577.82	4,607.79	1.50	0.00	1.50
12,400.00	90.38	0.53	7,592.24	4,706.79	-578.20	4,707.79	1.50	0.00	1.50

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well NELSON 35-17HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4969.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4969.00usft (Drilling Rig)
Site:	2N-68W-35 NELSON 28-35HZ PAD	North Reference:	True
Well:	NELSON 35-17HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
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)
12,500.00	90.38	2.03	7,591.57	4,806.76	-575.97	4,807.76	1.50	0.00	1.50
12,552.35	90.38	2.81	7,591.22	4,859.06	-573.76	4,860.05	1.50	0.00	1.50
End Turn @ 12552.35ft									
12,600.00	90.38	2.81	7,590.91	4,906.65	-571.42	4,907.64	0.00	0.00	0.00
12,700.00	90.38	2.81	7,590.24	5,006.53	-566.51	5,007.51	0.00	0.00	0.00
12,800.00	90.38	2.81	7,589.58	5,106.40	-561.60	5,107.38	0.00	0.00	0.00
12,900.00	90.38	2.81	7,588.91	5,206.28	-556.69	5,207.25	0.00	0.00	0.00
13,000.00	90.38	2.81	7,588.25	5,306.16	-551.78	5,307.11	0.00	0.00	0.00
13,100.00	90.38	2.81	7,587.59	5,406.04	-546.87	5,406.98	0.00	0.00	0.00
13,200.00	90.38	2.81	7,586.92	5,505.91	-541.96	5,506.85	0.00	0.00	0.00
13,300.00	90.38	2.81	7,586.26	5,605.79	-537.05	5,606.72	0.00	0.00	0.00
13,400.00	90.38	2.81	7,585.59	5,705.67	-532.14	5,706.59	0.00	0.00	0.00
13,500.00	90.38	2.81	7,584.93	5,805.54	-527.22	5,806.46	0.00	0.00	0.00
13,600.00	90.38	2.81	7,584.26	5,905.42	-522.31	5,906.32	0.00	0.00	0.00
13,700.00	90.38	2.81	7,583.60	6,005.30	-517.40	6,006.19	0.00	0.00	0.00
13,800.00	90.38	2.81	7,582.93	6,105.18	-512.49	6,106.06	0.00	0.00	0.00
13,900.00	90.38	2.81	7,582.27	6,205.05	-507.58	6,205.93	0.00	0.00	0.00
14,000.00	90.38	2.81	7,581.60	6,304.93	-502.67	6,305.80	0.00	0.00	0.00
14,100.00	90.38	2.81	7,580.94	6,404.81	-497.76	6,405.67	0.00	0.00	0.00
14,200.00	90.38	2.81	7,580.27	6,504.68	-492.85	6,505.53	0.00	0.00	0.00
14,300.00	90.38	2.81	7,579.61	6,604.56	-487.94	6,605.40	0.00	0.00	0.00
14,400.00	90.38	2.81	7,578.94	6,704.44	-483.03	6,705.27	0.00	0.00	0.00
14,500.00	90.38	2.81	7,578.28	6,804.32	-478.12	6,805.14	0.00	0.00	0.00
14,600.00	90.38	2.81	7,577.62	6,904.19	-473.21	6,905.01	0.00	0.00	0.00
14,700.00	90.38	2.81	7,576.95	7,004.07	-468.30	7,004.88	0.00	0.00	0.00
14,800.00	90.38	2.81	7,576.29	7,103.95	-463.39	7,104.75	0.00	0.00	0.00
14,900.00	90.38	2.81	7,575.62	7,203.82	-458.48	7,204.61	0.00	0.00	0.00
15,000.00	90.38	2.81	7,574.96	7,303.70	-453.57	7,304.48	0.00	0.00	0.00
15,100.00	90.38	2.81	7,574.29	7,403.58	-448.66	7,404.35	0.00	0.00	0.00
15,200.00	90.38	2.81	7,573.63	7,503.46	-443.75	7,504.22	0.00	0.00	0.00
15,300.00	90.38	2.81	7,572.96	7,603.33	-438.84	7,604.09	0.00	0.00	0.00
15,400.00	90.38	2.81	7,572.30	7,703.21	-433.93	7,703.96	0.00	0.00	0.00
15,500.00	90.38	2.81	7,571.63	7,803.09	-429.02	7,803.82	0.00	0.00	0.00
15,600.00	90.38	2.81	7,570.97	7,902.96	-424.10	7,903.69	0.00	0.00	0.00
15,700.00	90.38	2.81	7,570.30	8,002.84	-419.19	8,003.56	0.00	0.00	0.00
15,800.00	90.38	2.81	7,569.64	8,102.72	-414.28	8,103.43	0.00	0.00	0.00
15,900.00	90.38	2.81	7,568.98	8,202.60	-409.37	8,203.30	0.00	0.00	0.00
16,000.00	90.38	2.81	7,568.31	8,302.47	-404.46	8,303.17	0.00	0.00	0.00
16,100.00	90.38	2.81	7,567.65	8,402.35	-399.55	8,403.04	0.00	0.00	0.00
16,200.00	90.38	2.81	7,566.98	8,502.23	-394.64	8,502.90	0.00	0.00	0.00
16,300.00	90.38	2.81	7,566.32	8,602.10	-389.73	8,602.77	0.00	0.00	0.00
16,347.64	90.38	2.81	7,566.00	8,649.68	-387.39	8,650.34	0.00	0.00	0.00
TD Well @ 16347.64ft									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,509.81	1,500.00	9 5/8" Csg	9-5/8	13-1/2	
8,075.33	7,621.00	Top of Production	5-1/2	7-7/8	

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well NELSON 35-17HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4969.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4969.00usft (Drilling Rig)
Site:	2N-68W-35 NELSON 28-35HZ PAD	North Reference:	True
Well:	NELSON 35-17HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan B		
Design:	Permit Rev-1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
982.03	980.00	Fox Hills				
4,080.76	4,040.00	Parkman				
4,572.76	4,532.00	Sussex				
7,279.75	7,227.00	Sharon Springs				
7,375.03	7,309.00	Niobrara				
7,467.82	7,382.00	Nio B				
7,595.27	7,469.00	Nio C				
7,845.70	7,586.00	Fort Hayes				
7,939.21	7,609.00	Codell				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
420.00	420.00	0.00	0.00	Begin Nudge @ 420.00ft	
1,086.67	1,083.29	-38.83	-43.12	Hold Tangent @ 1086.67ft	
3,380.00	3,341.78	-305.30	-339.07	Begin Drop @ 3380.00ft	
3,880.00	3,839.25	-334.42	-371.41	Hold Vertical @ 3880.00ft	
6,945.57	6,904.82	-334.42	-371.41	KOP @ 6945.57ft :: DLS = 8"/100'	
8,075.33	7,621.00	385.90	-401.68	End Build @ 8075.33ft	
12,204.32	7,593.54	4,511.16	-575.00	Begin Turn to BHL @ 12204.32ft	
12,552.35	7,591.22	4,859.06	-573.76	End Turn @ 12552.35ft	
16,347.64	7,566.00	8,649.68	-387.39	TD Well @ 16347.64ft	