

US ROCKIES WATTENBERG PLANNING

**WELD-NAD83-UTMFT13N
4N-68W-11 S&B 5-11HZ PAD
BAKE 11-27HZ**

Plan A

Plan: Permit Rev-1

SHL Lat/Long: 40.329878/-104.976664
Survey Program: MWD+IFR+MSA

Standard Planning Report

14 February, 2019

Project: WELD-NAD83-UTMFT13N
Site: 4N-68W-11 S&B 5-11HZ PAD
Well: BAKE 11-27HZ
Wellbore: Plan A
Design: Permit Rev-1

US ROCKIES WATTENBERG PLANNING

CASING DETAILS

TVD	MD	Size
1500.00	1526.50	9-5/8
6959.00	8127.40	5-1/2

WELL DETAILS: BAKE 11-27HZ

GL = 4994.00

RKB = 17' @ 5011.00usft (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	2048.67	27.73	182.65	1977.34	-438.23	-20.28	1.50	182.65	18.98	
4	6984.59	27.73	182.65	6346.37	-2732.48	-126.47	0.00	0.00	118.36	
5	8127.40	92.91	270.17	6959.00	-3071.53	-875.55	8.00	86.46	866.44	
6	18250.14	92.91	270.17	6445.00	-3040.78	-10985.18	0.00	0.00	10976.11	BAKE 11-27HZ_BHL

SHL
2057' FNL
867' FWL

HEEL
200' FSL
15' FEL

TOE
346' FSL
475' FWL

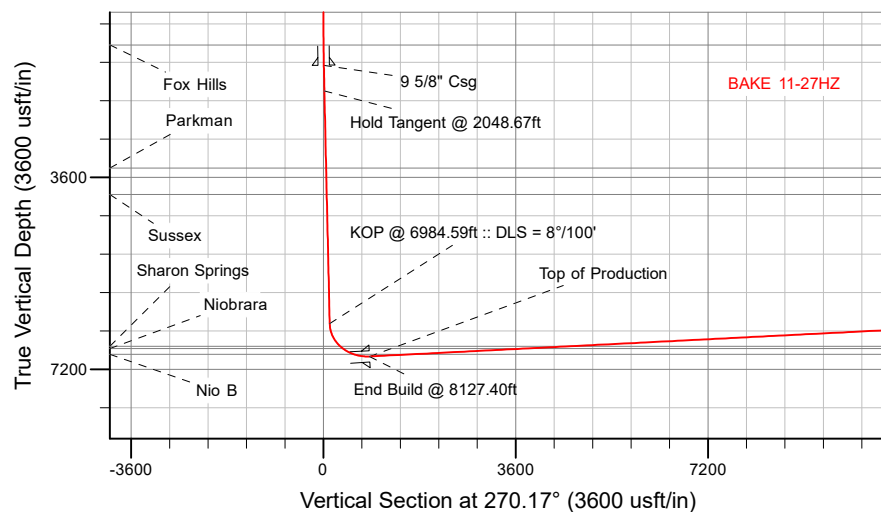
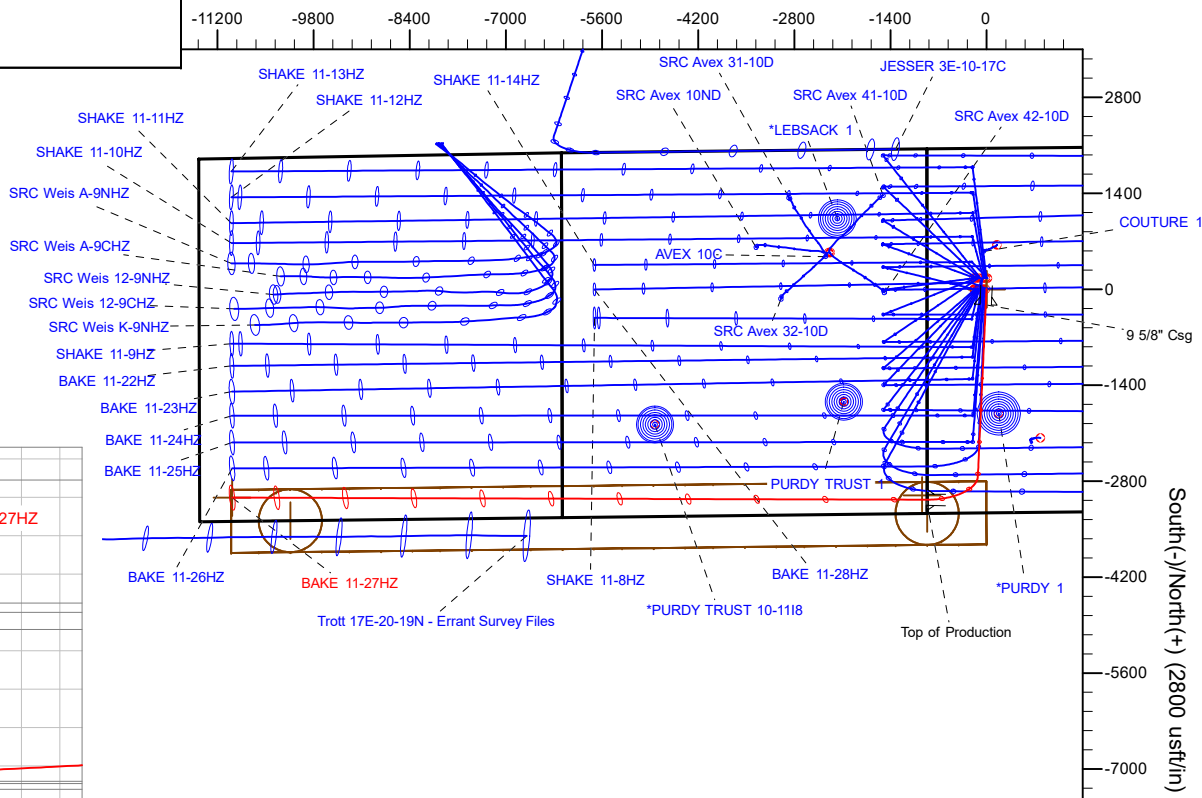
WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
BAKE 11-27HZ_SHL	0.00	0.00	0.00	40.329878	-104.976664
BAKE 11-27HZ_BHL	6445.00	-3040.78	-10985.18	40.321521	-105.016075

FORMATION TOP DETAILS

TVDPATH	MDPATH	Formation
1119.00	1128.11	Fox Hills
3424.00	3683.04	Parkman
3920.00	4243.39	Sussex
6769.00	7515.46	Sharon Springs
6812.00	7586.94	Niobrara
6919.00	7827.27	Nio B

West(-)/East(+) (2800 usft/in)



Plan: Permit Rev-1 (BAKE 11-27HZ/Plan A)

Date: 2/14/2019

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BAKE 11-27HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5011.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5011.00usft (Drilling Rig)
Site:	4N-68W-11 S&B 5-11HZ PAD	North Reference:	True
Well:	BAKE 11-27HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
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	4N-68W-11 S&B 5-11HZ PAD			
Site Position:		Northing:	14,647,020.58 usft	Latitude: 40.330320
From:	Lat/Long	Easting:	1,646,741.13 usft	Longitude: -104.977307
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.01 °

Well	BAKE 11-27HZ			
Well Position	+N/-S	-160.96 usft	Northing:	14,646,859.67 usft
	+E/-W	179.20 usft	Easting:	1,646,920.38 usft
Position Uncertainty	3.28 usft	Wellhead Elevation:		Ground Level: 4,994.00 usft

Wellbore	Plan A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	2/7/2019	8.14	66.72	52,144.81443953

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	270.17

Plan Survey Tool Program	Date	2/13/2019		
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+I Fixed:v2:crustal field declinatio
2	1,500.00	18,250.14	Permit Rev-1 (Plan A)	APC_ISCWSA REV 2 MWD+I Fixed:v2:Rockies, crustal dec +

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	
2,048.67	27.73	182.65	1,977.34	-438.23	-20.28	1.50	1.50	0.00	182.65	
6,984.59	27.73	182.65	6,346.37	-2,732.48	-126.47	0.00	0.00	0.00	0.00	
8,127.40	92.91	270.17	6,959.00	-3,071.53	-875.55	8.00	5.70	7.66	86.46	
18,250.14	92.91	270.17	6,445.00	-3,040.78	-10,985.18	0.00	0.00	0.00	0.00	BAKE 11-27HZ_BHL

Corporate Planning Report

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Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5011.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5011.00usft (Drilling Rig)
Site:	4N-68W-11 S&B 5-11HZ PAD	North Reference:	True
Well:	BAKE 11-27HZ	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
Begin Nudge @ 200.00ft									
300.00	1.50	182.65	299.99	-1.31	-0.06	0.06	1.50	1.50	0.00
400.00	3.00	182.65	399.91	-5.23	-0.24	0.23	1.50	1.50	0.00
500.00	4.50	182.65	499.69	-11.76	-0.54	0.51	1.50	1.50	0.00
600.00	6.00	182.65	599.27	-20.90	-0.97	0.91	1.50	1.50	0.00
700.00	7.50	182.65	698.57	-32.64	-1.51	1.41	1.50	1.50	0.00
800.00	9.00	182.65	797.54	-46.98	-2.17	2.03	1.50	1.50	0.00
900.00	10.50	182.65	896.09	-63.89	-2.96	2.77	1.50	1.50	0.00
1,000.00	12.00	182.65	994.16	-83.38	-3.86	3.61	1.50	1.50	0.00
1,100.00	13.50	182.65	1,091.70	-105.43	-4.88	4.57	1.50	1.50	0.00
1,128.11	13.92	182.65	1,119.00	-112.08	-5.19	4.85	1.50	1.50	0.00
Fox Hills									
1,200.00	15.00	182.65	1,188.62	-130.01	-6.02	5.63	1.50	1.50	0.00
1,300.00	16.50	182.65	1,284.86	-157.13	-7.27	6.81	1.50	1.50	0.00
1,400.00	18.00	182.65	1,380.36	-186.75	-8.64	8.09	1.50	1.50	0.00
1,500.00	19.50	182.65	1,475.05	-218.86	-10.13	9.48	1.50	1.50	0.00
1,526.50	19.90	182.65	1,500.00	-227.78	-10.54	9.87	1.50	1.50	0.00
9 5/8" Csg									
1,600.00	21.00	182.65	1,568.86	-253.43	-11.73	10.98	1.50	1.50	0.00
1,700.00	22.50	182.65	1,661.74	-290.45	-13.44	12.58	1.50	1.50	0.00
1,800.00	24.00	182.65	1,753.62	-329.88	-15.27	14.29	1.50	1.50	0.00
1,900.00	25.50	182.65	1,844.43	-371.70	-17.20	16.10	1.50	1.50	0.00
2,000.00	27.00	182.65	1,934.12	-415.88	-19.25	18.01	1.50	1.50	0.00
2,048.67	27.73	182.65	1,977.34	-438.23	-20.28	18.98	1.50	1.50	0.00
Hold Tangent @ 2048.67ft									
2,100.00	27.73	182.65	2,022.77	-462.09	-21.39	20.02	0.00	0.00	0.00
2,200.00	27.73	182.65	2,111.29	-508.57	-23.54	22.03	0.00	0.00	0.00
2,300.00	27.73	182.65	2,199.80	-555.05	-25.69	24.04	0.00	0.00	0.00
2,400.00	27.73	182.65	2,288.32	-601.53	-27.84	26.06	0.00	0.00	0.00
2,500.00	27.73	182.65	2,376.83	-648.01	-29.99	28.07	0.00	0.00	0.00
2,600.00	27.73	182.65	2,465.35	-694.49	-32.14	30.08	0.00	0.00	0.00
2,700.00	27.73	182.65	2,553.86	-740.97	-34.30	32.10	0.00	0.00	0.00
2,800.00	27.73	182.65	2,642.38	-787.45	-36.45	34.11	0.00	0.00	0.00
2,900.00	27.73	182.65	2,730.89	-833.93	-38.60	36.12	0.00	0.00	0.00
3,000.00	27.73	182.65	2,819.41	-880.41	-40.75	38.14	0.00	0.00	0.00
3,100.00	27.73	182.65	2,907.92	-926.89	-42.90	40.15	0.00	0.00	0.00
3,200.00	27.73	182.65	2,996.44	-973.37	-45.05	42.16	0.00	0.00	0.00
3,300.00	27.73	182.65	3,084.95	-1,019.85	-47.20	44.18	0.00	0.00	0.00
3,400.00	27.73	182.65	3,173.47	-1,066.34	-49.35	46.19	0.00	0.00	0.00
3,500.00	27.73	182.65	3,261.98	-1,112.82	-51.51	48.20	0.00	0.00	0.00
3,600.00	27.73	182.65	3,350.50	-1,159.30	-53.66	50.22	0.00	0.00	0.00
3,683.04	27.73	182.65	3,424.00	-1,197.89	-55.44	51.89	0.00	0.00	0.00
Parkman									
3,700.00	27.73	182.65	3,439.01	-1,205.78	-55.81	52.23	0.00	0.00	0.00
3,800.00	27.73	182.65	3,527.53	-1,252.26	-57.96	54.24	0.00	0.00	0.00
3,900.00	27.73	182.65	3,616.04	-1,298.74	-60.11	56.26	0.00	0.00	0.00
4,000.00	27.73	182.65	3,704.56	-1,345.22	-62.26	58.27	0.00	0.00	0.00
4,100.00	27.73	182.65	3,793.07	-1,391.70	-64.41	60.28	0.00	0.00	0.00
4,200.00	27.73	182.65	3,881.59	-1,438.18	-66.57	62.30	0.00	0.00	0.00
4,243.39	27.73	182.65	3,920.00	-1,458.35	-67.50	63.17	0.00	0.00	0.00

Corporate Planning Report

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Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5011.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5011.00usft (Drilling Rig)
Site:	4N-68W-11 S&B 5-11HZ PAD	North Reference:	True
Well:	BAKE 11-27HZ	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)
Sussex									
4,300.00	27.73	182.65	3,970.10	-1,484.66	-68.72	64.31	0.00	0.00	0.00
4,400.00	27.73	182.65	4,058.62	-1,531.14	-70.87	66.32	0.00	0.00	0.00
4,500.00	27.73	182.65	4,147.13	-1,577.62	-73.02	68.34	0.00	0.00	0.00
4,600.00	27.73	182.65	4,235.65	-1,624.11	-75.17	70.35	0.00	0.00	0.00
4,700.00	27.73	182.65	4,324.16	-1,670.59	-77.32	72.36	0.00	0.00	0.00
4,800.00	27.73	182.65	4,412.68	-1,717.07	-79.47	74.38	0.00	0.00	0.00
4,900.00	27.73	182.65	4,501.19	-1,763.55	-81.62	76.39	0.00	0.00	0.00
5,000.00	27.73	182.65	4,589.71	-1,810.03	-83.78	78.40	0.00	0.00	0.00
5,100.00	27.73	182.65	4,678.22	-1,856.51	-85.93	80.42	0.00	0.00	0.00
5,200.00	27.73	182.65	4,766.74	-1,902.99	-88.08	82.43	0.00	0.00	0.00
5,300.00	27.73	182.65	4,855.25	-1,949.47	-90.23	84.45	0.00	0.00	0.00
5,400.00	27.73	182.65	4,943.77	-1,995.95	-92.38	86.46	0.00	0.00	0.00
5,500.00	27.73	182.65	5,032.28	-2,042.43	-94.53	88.47	0.00	0.00	0.00
5,600.00	27.73	182.65	5,120.80	-2,088.91	-96.68	90.49	0.00	0.00	0.00
5,700.00	27.73	182.65	5,209.31	-2,135.39	-98.84	92.50	0.00	0.00	0.00
5,800.00	27.73	182.65	5,297.83	-2,181.87	-100.99	94.51	0.00	0.00	0.00
5,900.00	27.73	182.65	5,386.34	-2,228.36	-103.14	96.53	0.00	0.00	0.00
6,000.00	27.73	182.65	5,474.86	-2,274.84	-105.29	98.54	0.00	0.00	0.00
6,100.00	27.73	182.65	5,563.37	-2,321.32	-107.44	100.55	0.00	0.00	0.00
6,200.00	27.73	182.65	5,651.89	-2,367.80	-109.59	102.57	0.00	0.00	0.00
6,300.00	27.73	182.65	5,740.40	-2,414.28	-111.74	104.58	0.00	0.00	0.00
6,400.00	27.73	182.65	5,828.92	-2,460.76	-113.89	106.59	0.00	0.00	0.00
6,500.00	27.73	182.65	5,917.43	-2,507.24	-116.05	108.61	0.00	0.00	0.00
6,600.00	27.73	182.65	6,005.95	-2,553.72	-118.20	110.62	0.00	0.00	0.00
6,700.00	27.73	182.65	6,094.46	-2,600.20	-120.35	112.63	0.00	0.00	0.00
6,800.00	27.73	182.65	6,182.98	-2,646.68	-122.50	114.65	0.00	0.00	0.00
6,900.00	27.73	182.65	6,271.49	-2,693.16	-124.65	116.66	0.00	0.00	0.00
6,984.59	27.73	182.65	6,346.37	-2,732.48	-126.47	118.36	0.00	0.00	0.00
KOP @ 6984.59ft :: DLS = 8°/100'									
7,000.00	27.83	185.29	6,360.00	-2,739.65	-126.97	118.84	8.00	0.66	17.11
7,100.00	29.65	201.54	6,447.82	-2,785.97	-138.22	129.95	8.00	1.82	16.25
7,200.00	33.19	215.35	6,533.25	-2,831.38	-163.17	154.77	8.00	3.54	13.81
7,300.00	37.96	226.41	6,614.65	-2,874.98	-201.35	192.81	8.00	4.77	11.07
7,400.00	43.56	235.18	6,690.43	-2,915.92	-252.00	243.34	8.00	5.60	8.77
7,500.00	49.71	242.25	6,759.10	-2,953.41	-314.14	305.37	8.00	6.14	7.06
7,515.46	50.69	243.22	6,769.00	-2,958.85	-324.69	315.91	8.00	6.37	6.30
Sharon Springs									
7,586.94	55.34	247.39	6,812.00	-2,982.63	-376.56	367.71	8.00	6.51	5.83
Niobrara									
7,600.00	56.21	248.10	6,819.35	-2,986.72	-386.56	377.69	8.00	6.62	5.43
7,700.00	62.94	253.11	6,869.98	-3,015.21	-467.85	458.90	8.00	6.74	5.01
7,800.00	69.84	257.54	6,910.03	-3,038.30	-556.43	547.42	8.00	6.89	4.43
7,827.27	71.74	258.68	6,919.00	-3,043.61	-581.63	572.59	8.00	6.97	4.17
Nio B									
7,900.00	76.83	261.60	6,938.70	-3,055.57	-650.58	641.51	8.00	7.01	4.01
8,000.00	83.89	265.43	6,955.44	-3,066.66	-748.46	739.36	8.00	7.06	3.83
8,100.00	90.97	269.15	6,959.93	-3,071.37	-848.17	839.05	8.00	7.08	3.73
8,127.40	92.91	270.17	6,959.00	-3,071.53	-875.55	866.43	8.00	7.08	3.72
End Build @ 8127.40ft - Top of Production									
8,200.00	92.91	270.17	6,955.31	-3,071.31	-948.05	938.94	0.00	0.00	0.00
8,300.00	92.91	270.17	6,950.23	-3,071.01	-1,047.93	1,038.81	0.00	0.00	0.00
8,400.00	92.91	270.17	6,945.16	-3,070.70	-1,147.80	1,138.68	0.00	0.00	0.00

Corporate Planning Report

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Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5011.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5011.00usft (Drilling Rig)
Site:	4N-68W-11 S&B 5-11HZ PAD	North Reference:	True
Well:	BAKE 11-27HZ	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	92.91	270.17	6,940.08	-3,070.40	-1,247.67	1,238.55	0.00	0.00	0.00	
8,600.00	92.91	270.17	6,935.00	-3,070.09	-1,347.54	1,338.42	0.00	0.00	0.00	
8,700.00	92.91	270.17	6,929.92	-3,069.79	-1,447.41	1,438.29	0.00	0.00	0.00	
8,800.00	92.91	270.17	6,924.85	-3,069.49	-1,547.28	1,538.16	0.00	0.00	0.00	
8,900.00	92.91	270.17	6,919.77	-3,069.18	-1,647.15	1,638.03	0.00	0.00	0.00	
9,000.00	92.91	270.17	6,914.69	-3,068.88	-1,747.02	1,737.91	0.00	0.00	0.00	
9,100.00	92.91	270.17	6,909.61	-3,068.58	-1,846.89	1,837.78	0.00	0.00	0.00	
9,200.00	92.91	270.17	6,904.54	-3,068.27	-1,946.76	1,937.65	0.00	0.00	0.00	
9,300.00	92.91	270.17	6,899.46	-3,067.97	-2,046.63	2,037.52	0.00	0.00	0.00	
9,400.00	92.91	270.17	6,894.38	-3,067.66	-2,146.50	2,137.39	0.00	0.00	0.00	
9,500.00	92.91	270.17	6,889.30	-3,067.36	-2,246.37	2,237.26	0.00	0.00	0.00	
9,600.00	92.91	270.17	6,884.22	-3,067.06	-2,346.24	2,337.13	0.00	0.00	0.00	
9,700.00	92.91	270.17	6,879.15	-3,066.75	-2,446.11	2,437.00	0.00	0.00	0.00	
9,800.00	92.91	270.17	6,874.07	-3,066.45	-2,545.98	2,536.87	0.00	0.00	0.00	
9,900.00	92.91	270.17	6,868.99	-3,066.15	-2,645.85	2,636.74	0.00	0.00	0.00	
10,000.00	92.91	270.17	6,863.91	-3,065.84	-2,745.72	2,736.62	0.00	0.00	0.00	
10,100.00	92.91	270.17	6,858.84	-3,065.54	-2,845.60	2,836.49	0.00	0.00	0.00	
10,200.00	92.91	270.17	6,853.76	-3,065.23	-2,945.47	2,936.36	0.00	0.00	0.00	
10,300.00	92.91	270.17	6,848.68	-3,064.93	-3,045.34	3,036.23	0.00	0.00	0.00	
10,400.00	92.91	270.17	6,843.60	-3,064.63	-3,145.21	3,136.10	0.00	0.00	0.00	
10,500.00	92.91	270.17	6,838.53	-3,064.32	-3,245.08	3,235.97	0.00	0.00	0.00	
10,600.00	92.91	270.17	6,833.45	-3,064.02	-3,344.95	3,335.84	0.00	0.00	0.00	
10,700.00	92.91	270.17	6,828.37	-3,063.71	-3,444.82	3,435.71	0.00	0.00	0.00	
10,800.00	92.91	270.17	6,823.29	-3,063.41	-3,544.69	3,535.58	0.00	0.00	0.00	
10,900.00	92.91	270.17	6,818.21	-3,063.11	-3,644.56	3,635.45	0.00	0.00	0.00	
11,000.00	92.91	270.17	6,813.14	-3,062.80	-3,744.43	3,735.33	0.00	0.00	0.00	
11,100.00	92.91	270.17	6,808.06	-3,062.50	-3,844.30	3,835.20	0.00	0.00	0.00	
11,200.00	92.91	270.17	6,802.98	-3,062.20	-3,944.17	3,935.07	0.00	0.00	0.00	
11,300.00	92.91	270.17	6,797.90	-3,061.89	-4,044.04	4,034.94	0.00	0.00	0.00	
11,400.00	92.91	270.17	6,792.83	-3,061.59	-4,143.91	4,134.81	0.00	0.00	0.00	
11,500.00	92.91	270.17	6,787.75	-3,061.28	-4,243.78	4,234.68	0.00	0.00	0.00	
11,600.00	92.91	270.17	6,782.67	-3,060.98	-4,343.65	4,334.55	0.00	0.00	0.00	
11,700.00	92.91	270.17	6,777.59	-3,060.68	-4,443.52	4,434.42	0.00	0.00	0.00	
11,800.00	92.91	270.17	6,772.52	-3,060.37	-4,543.39	4,534.29	0.00	0.00	0.00	
11,900.00	92.91	270.17	6,767.44	-3,060.07	-4,643.26	4,634.17	0.00	0.00	0.00	
12,000.00	92.91	270.17	6,762.36	-3,059.77	-4,743.14	4,734.04	0.00	0.00	0.00	
12,100.00	92.91	270.17	6,757.28	-3,059.46	-4,843.01	4,833.91	0.00	0.00	0.00	
12,200.00	92.91	270.17	6,752.21	-3,059.16	-4,942.88	4,933.78	0.00	0.00	0.00	
12,300.00	92.91	270.17	6,747.13	-3,058.85	-5,042.75	5,033.65	0.00	0.00	0.00	
12,400.00	92.91	270.17	6,742.05	-3,058.55	-5,142.62	5,133.52	0.00	0.00	0.00	
12,500.00	92.91	270.17	6,736.97	-3,058.25	-5,242.49	5,233.39	0.00	0.00	0.00	
12,600.00	92.91	270.17	6,731.89	-3,057.94	-5,342.36	5,333.26	0.00	0.00	0.00	
12,700.00	92.91	270.17	6,726.82	-3,057.64	-5,442.23	5,433.13	0.00	0.00	0.00	
12,800.00	92.91	270.17	6,721.74	-3,057.34	-5,542.10	5,533.00	0.00	0.00	0.00	
12,900.00	92.91	270.17	6,716.66	-3,057.03	-5,641.97	5,632.88	0.00	0.00	0.00	
13,000.00	92.91	270.17	6,711.58	-3,056.73	-5,741.84	5,732.75	0.00	0.00	0.00	
13,100.00	92.91	270.17	6,706.51	-3,056.42	-5,841.71	5,832.62	0.00	0.00	0.00	
13,200.00	92.91	270.17	6,701.43	-3,056.12	-5,941.58	5,932.49	0.00	0.00	0.00	
13,300.00	92.91	270.17	6,696.35	-3,055.82	-6,041.45	6,032.36	0.00	0.00	0.00	
13,400.00	92.91	270.17	6,691.27	-3,055.51	-6,141.32	6,132.23	0.00	0.00	0.00	
13,500.00	92.91	270.17	6,686.20	-3,055.21	-6,241.19	6,232.10	0.00	0.00	0.00	
13,600.00	92.91	270.17	6,681.12	-3,054.90	-6,341.06	6,331.97	0.00	0.00	0.00	
13,700.00	92.91	270.17	6,676.04	-3,054.60	-6,440.93	6,431.84	0.00	0.00	0.00	
13,800.00	92.91	270.17	6,670.96	-3,054.30	-6,540.81	6,531.71	0.00	0.00	0.00	

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BAKE 11-27HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5011.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5011.00usft (Drilling Rig)
Site:	4N-68W-11 S&B 5-11HZ PAD	North Reference:	True
Well:	BAKE 11-27HZ	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	92.91	270.17	6,665.89	-3,053.99	-6,640.68	6,631.59	0.00	0.00	0.00
14,000.00	92.91	270.17	6,660.81	-3,053.69	-6,740.55	6,731.46	0.00	0.00	0.00
14,100.00	92.91	270.17	6,655.73	-3,053.39	-6,840.42	6,831.33	0.00	0.00	0.00
14,200.00	92.91	270.17	6,650.65	-3,053.08	-6,940.29	6,931.20	0.00	0.00	0.00
14,300.00	92.91	270.17	6,645.57	-3,052.78	-7,040.16	7,031.07	0.00	0.00	0.00
14,400.00	92.91	270.17	6,640.50	-3,052.47	-7,140.03	7,130.94	0.00	0.00	0.00
14,500.00	92.91	270.17	6,635.42	-3,052.17	-7,239.90	7,230.81	0.00	0.00	0.00
14,600.00	92.91	270.17	6,630.34	-3,051.87	-7,339.77	7,330.68	0.00	0.00	0.00
14,700.00	92.91	270.17	6,625.26	-3,051.56	-7,439.64	7,430.55	0.00	0.00	0.00
14,800.00	92.91	270.17	6,620.19	-3,051.26	-7,539.51	7,530.42	0.00	0.00	0.00
14,900.00	92.91	270.17	6,615.11	-3,050.96	-7,639.38	7,630.30	0.00	0.00	0.00
15,000.00	92.91	270.17	6,610.03	-3,050.65	-7,739.25	7,730.17	0.00	0.00	0.00
15,100.00	92.91	270.17	6,604.95	-3,050.35	-7,839.12	7,830.04	0.00	0.00	0.00
15,200.00	92.91	270.17	6,599.88	-3,050.04	-7,938.99	7,929.91	0.00	0.00	0.00
15,300.00	92.91	270.17	6,594.80	-3,049.74	-8,038.86	8,029.78	0.00	0.00	0.00
15,400.00	92.91	270.17	6,589.72	-3,049.44	-8,138.73	8,129.65	0.00	0.00	0.00
15,500.00	92.91	270.17	6,584.64	-3,049.13	-8,238.60	8,229.52	0.00	0.00	0.00
15,600.00	92.91	270.17	6,579.57	-3,048.83	-8,338.47	8,329.39	0.00	0.00	0.00
15,700.00	92.91	270.17	6,574.49	-3,048.53	-8,438.35	8,429.26	0.00	0.00	0.00
15,800.00	92.91	270.17	6,569.41	-3,048.22	-8,538.22	8,529.13	0.00	0.00	0.00
15,900.00	92.91	270.17	6,564.33	-3,047.92	-8,638.09	8,629.01	0.00	0.00	0.00
16,000.00	92.91	270.17	6,559.25	-3,047.61	-8,737.96	8,728.88	0.00	0.00	0.00
16,100.00	92.91	270.17	6,554.18	-3,047.31	-8,837.83	8,828.75	0.00	0.00	0.00
16,200.00	92.91	270.17	6,549.10	-3,047.01	-8,937.70	8,928.62	0.00	0.00	0.00
16,300.00	92.91	270.17	6,544.02	-3,046.70	-9,037.57	9,028.49	0.00	0.00	0.00
16,400.00	92.91	270.17	6,538.94	-3,046.40	-9,137.44	9,128.36	0.00	0.00	0.00
16,500.00	92.91	270.17	6,533.87	-3,046.09	-9,237.31	9,228.23	0.00	0.00	0.00
16,600.00	92.91	270.17	6,528.79	-3,045.79	-9,337.18	9,328.10	0.00	0.00	0.00
16,700.00	92.91	270.17	6,523.71	-3,045.49	-9,437.05	9,427.97	0.00	0.00	0.00
16,800.00	92.91	270.17	6,518.63	-3,045.18	-9,536.92	9,527.84	0.00	0.00	0.00
16,900.00	92.91	270.17	6,513.56	-3,044.88	-9,636.79	9,627.72	0.00	0.00	0.00
17,000.00	92.91	270.17	6,508.48	-3,044.58	-9,736.66	9,727.59	0.00	0.00	0.00
17,100.00	92.91	270.17	6,503.40	-3,044.27	-9,836.53	9,827.46	0.00	0.00	0.00
17,200.00	92.91	270.17	6,498.32	-3,043.97	-9,936.40	9,927.33	0.00	0.00	0.00
17,300.00	92.91	270.17	6,493.24	-3,043.66	-10,036.27	10,027.20	0.00	0.00	0.00
17,400.00	92.91	270.17	6,488.17	-3,043.36	-10,136.14	10,127.07	0.00	0.00	0.00
17,500.00	92.91	270.17	6,483.09	-3,043.06	-10,236.02	10,226.94	0.00	0.00	0.00
17,600.00	92.91	270.17	6,478.01	-3,042.75	-10,335.89	10,326.81	0.00	0.00	0.00
17,700.00	92.91	270.17	6,472.93	-3,042.45	-10,435.76	10,426.68	0.00	0.00	0.00
17,800.00	92.91	270.17	6,467.86	-3,042.15	-10,535.63	10,526.55	0.00	0.00	0.00
17,900.00	92.91	270.17	6,462.78	-3,041.84	-10,635.50	10,626.43	0.00	0.00	0.00
18,000.00	92.91	270.17	6,457.70	-3,041.54	-10,735.37	10,726.30	0.00	0.00	0.00
18,100.00	92.91	270.17	6,452.62	-3,041.23	-10,835.24	10,826.17	0.00	0.00	0.00
18,200.00	92.91	270.17	6,447.55	-3,040.93	-10,935.11	10,926.04	0.00	0.00	0.00
18,250.14	92.91	270.17	6,445.00	-3,040.78	-10,985.18	10,976.11	0.00	0.00	0.00
TD Well @ 18250.14ft									

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BAKE 11-27HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5011.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5011.00usft (Drilling Rig)
Site:	4N-68W-11 S&B 5-11HZ PAD	North Reference:	True
Well:	BAKE 11-27HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,526.50	1,500.00	9 5/8" Csg	9-5/8	13-1/2	
8,127.40	6,959.00	Top of Production	5-1/2	7-7/8	

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,128.11	1,119.00	Fox Hills			
3,683.04	3,424.00	Parkman			
4,243.39	3,920.00	Sussex			
7,515.46	6,769.00	Sharon Springs			
7,586.94	6,812.00	Niobrara			
7,827.27	6,919.00	Nio B			

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	
2,048.67	1,977.34	-438.23	-20.28	Hold Tangent @ 2048.67ft	
6,984.59	6,346.37	-2,732.48	-126.47	KOP @ 6984.59ft :: DLS = 8°/100'	
8,127.40	6,959.00	-3,071.53	-875.55	End Build @ 8127.40ft	
18,250.14	6,445.00	-3,040.78	-10,985.18	TD Well @ 18250.14ft	