

US ROCKIES WATTENBERG PLANNING

WELD-NAD83-UTMFT13N

1N-66W-26 BEIERLE 2-26HZ PAD

BEIERLE 26-5HZ

Plan A

Plan: Permit Rev-2

SHL Lat/Long: 40.028609/-104.741134

Survey Program: MWD+IFR

Standard Planning Report

12 August, 2018

Project: WELD-NAD83-UTMFT13N
Site: 1N-66W-26 BEIERLE 2-26HZ PAD
Well: BEIERLE 26-5HZ
Wellbore: Plan A
Design: Permit Rev-2

US ROCKIES WATTENBERG PLANNING

CASING DETAILS

TVD	MD	Size
1500.00	1522.95	9-5/8
7645.00	8209.84	5-1/2

WELL DETAILS: BEIERLE 26-5HZ

GL = 5118'

RKB = 17' @ 5135.00usft (Drilling Rig)

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	V Sect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	
3	1414.00	17.46	29.35	1396.07	153.40	86.26	1.50	29.35	-153.23	
4	4214.00	17.46	29.35	4067.06	885.67	498.03	0.00	0.00	-884.72	
5	5087.00	0.00	0.00	4926.61	1000.72	562.73	2.00	-180.00	-999.64	
6	7089.20	0.00	0.00	6928.81	1000.72	562.73	0.00	0.00	-999.64	
7	8209.84	89.65	179.89	7645.00	288.88	564.05	8.00	179.89	-287.80	
8	12977.99	89.65	179.89	7674.00	-4479.17	572.87	0.00	0.00	4480.26	BEIERLE 26-5HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
BEIERLE 26-5HZ_SHL	0.00	0.00	0.00	40.028609	-104.741134
BEIERLE 26-5HZ_BHL	7674.00	-4479.17	572.87	40.016308	-104.739088

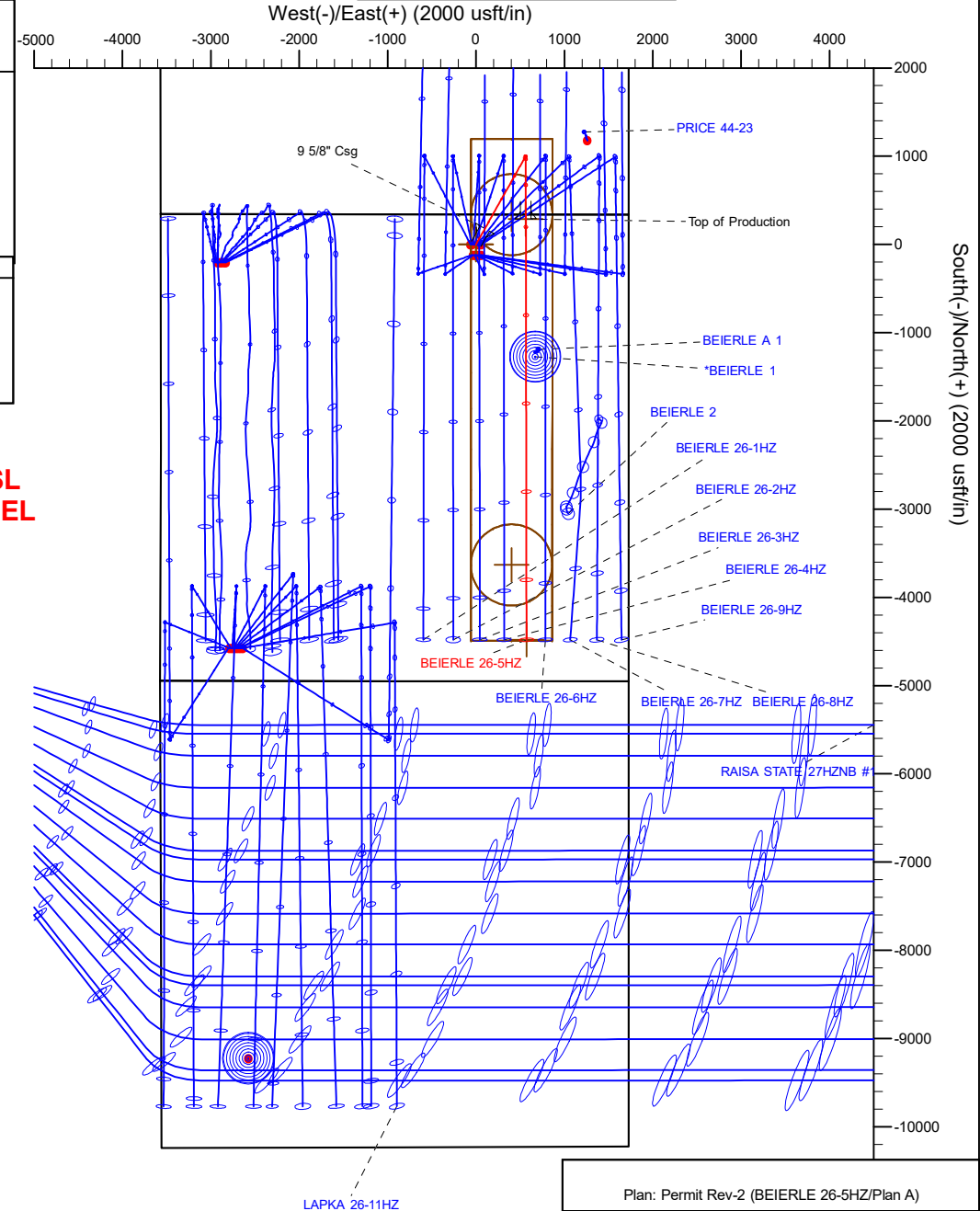
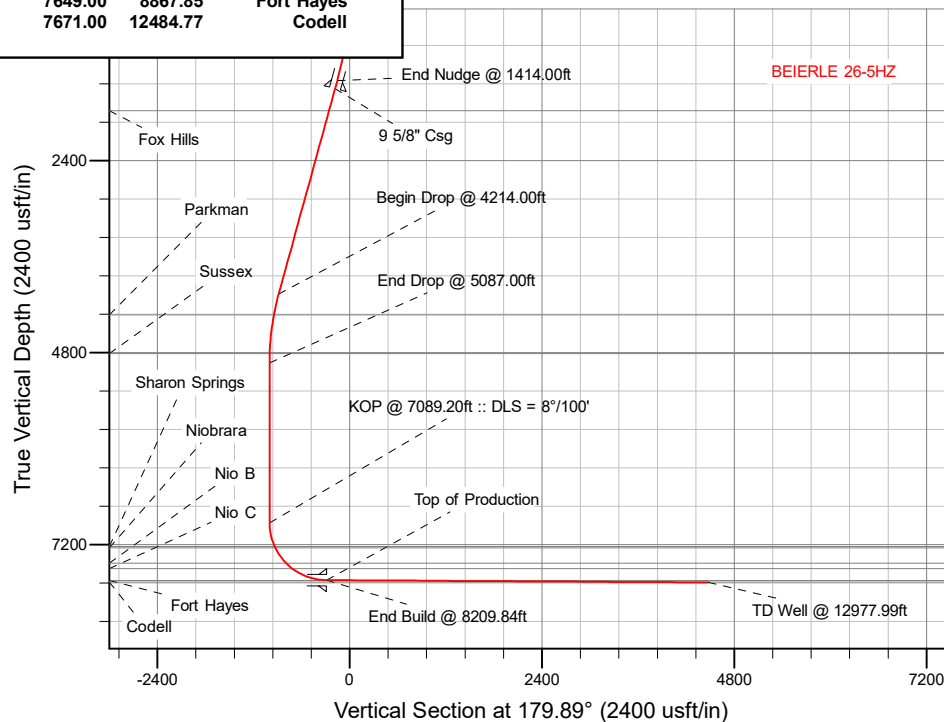
FORMATION TOP DETAILS

TVDPATH	MDPATH	Formation
1775.00	1811.23	Fox Hills
4327.00	4482.92	Parkman
4811.00	4971.35	Sussex
7225.00	7394.55	Sharon Springs
7240.00	7411.12	Niobrara
7435.00	7651.36	Nio B
7503.00	7755.38	Nio C
7649.00	8867.85	Fort Hayes
7671.00	12484.77	Codell

SHL
340' FNL
1729' FEL

HEEL
52' FNL
1165' FEL

TOE
470' FSL
1156' FEL



Plan: Permit Rev-2 (BEIERLE 26-5HZ/Plan A)

Date: 8/12/2018

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BEIERLE 26-5HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5135.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5135.00usft (Drilling Rig)
Site:	1N-66W-26 BEIERLE 2-26HZ PAD	North Reference:	True
Well:	BEIERLE 26-5HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

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	1N-66W-26 BEIERLE 2-26HZ PAD			
Site Position:		Northing:	14,537,256.31 usft	Latitude: 40.028609
From:	Lat/Long	Easting:	1,712,821.93 usft	Longitude: -104.741349
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence: 0.17 °

Well	BEIERLE 26-5HZ			
Well Position	+N/-S	0.00 usft	Northing:	14,537,256.49 usft
	+E/-W	60.19 usft	Easting:	1,712,882.11 usft
Position Uncertainty	3.28 usft	Wellhead Elevation:		Ground Level: 5,118.00 usft

Wellbore	Plan A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	3/24/2018	8.09	66.54	52,111.55784839

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	179.89

Plan Survey Tool Program	Date	8/12/2018		
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+II Fixed:v2:crustal field declinatio
2	1,500.00	12,977.99	Permit Rev-2 (Plan A)	APC_ISCWSA REV 2 MWD+II Fixed:v2:crustal field declinatio

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Planning Report

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Well:	BEIERLE 26-5HZ	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	
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,414.00	17.46	29.35	1,396.07	153.40	86.26	1.50	1.50	0.00	29.35	
4,214.00	17.46	29.35	4,067.06	885.67	498.03	0.00	0.00	0.00	0.00	
5,087.00	0.00	0.00	4,926.61	1,000.72	562.73	2.00	-2.00	-3.36	-180.00	
7,089.20	0.00	0.00	6,928.81	1,000.72	562.73	0.00	0.00	0.00	0.00	
8,209.84	89.65	179.89	7,645.00	288.88	564.05	8.00	8.00	16.05	179.89	
12,977.99	89.65	179.89	7,674.00	-4,479.17	572.87	0.00	0.00	0.00	0.00	BEIERLE 26-5HZ_BH

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BEIERLE 26-5HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5135.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5135.00usft (Drilling Rig)
Site:	1N-66W-26 BEIERLE 2-26HZ PAD	North Reference:	True
Well:	BEIERLE 26-5HZ	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
250.00	0.00	0.00	250.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 250.00ft									
300.00	0.75	29.35	300.00	0.29	0.16	-0.28	1.50	1.50	0.00
400.00	2.25	29.35	399.96	2.57	1.44	-2.56	1.50	1.50	0.00
500.00	3.75	29.35	499.82	7.13	4.01	-7.12	1.50	1.50	0.00
600.00	5.25	29.35	599.51	13.97	7.85	-13.95	1.50	1.50	0.00
700.00	6.75	29.35	698.96	23.08	12.98	-23.05	1.50	1.50	0.00
800.00	8.25	29.35	798.10	34.45	19.37	-34.42	1.50	1.50	0.00
900.00	9.75	29.35	896.87	48.09	27.04	-48.04	1.50	1.50	0.00
1,000.00	11.25	29.35	995.19	63.97	35.97	-63.90	1.50	1.50	0.00
1,100.00	12.75	29.35	1,093.00	82.10	46.16	-82.01	1.50	1.50	0.00
1,200.00	14.25	29.35	1,190.24	102.44	57.61	-102.33	1.50	1.50	0.00
1,300.00	15.75	29.35	1,286.83	125.00	70.29	-124.87	1.50	1.50	0.00
1,400.00	17.25	29.35	1,382.71	149.76	84.21	-149.60	1.50	1.50	0.00
1,414.00	17.46	29.35	1,396.07	153.40	86.26	-153.23	1.50	1.50	0.00
End Nudge @ 1414.00ft									
1,500.00	17.46	29.35	1,478.11	175.89	98.91	-175.70	0.00	0.00	0.00
1,522.95	17.46	29.35	1,500.00	181.89	102.28	-181.70	0.00	0.00	0.00
9 5/8" Csg									
1,600.00	17.46	29.35	1,573.50	202.04	113.61	-201.82	0.00	0.00	0.00
1,700.00	17.46	29.35	1,668.89	228.19	128.32	-227.95	0.00	0.00	0.00
1,800.00	17.46	29.35	1,764.28	254.35	143.03	-254.07	0.00	0.00	0.00
1,811.23	17.46	29.35	1,775.00	257.29	144.68	-257.01	0.00	0.00	0.00
Fox Hills									
1,900.00	17.46	29.35	1,859.68	280.50	157.73	-280.20	0.00	0.00	0.00
2,000.00	17.46	29.35	1,955.07	306.65	172.44	-306.32	0.00	0.00	0.00
2,100.00	17.46	29.35	2,050.46	332.81	187.14	-332.45	0.00	0.00	0.00
2,200.00	17.46	29.35	2,145.85	358.96	201.85	-358.57	0.00	0.00	0.00
2,300.00	17.46	29.35	2,241.25	385.11	216.56	-384.69	0.00	0.00	0.00
2,400.00	17.46	29.35	2,336.64	411.26	231.26	-410.82	0.00	0.00	0.00
2,500.00	17.46	29.35	2,432.03	437.42	245.97	-436.94	0.00	0.00	0.00
2,600.00	17.46	29.35	2,527.43	463.57	260.68	-463.07	0.00	0.00	0.00
2,700.00	17.46	29.35	2,622.82	489.72	275.38	-489.19	0.00	0.00	0.00
2,800.00	17.46	29.35	2,718.21	515.87	290.09	-515.32	0.00	0.00	0.00
2,900.00	17.46	29.35	2,813.60	542.03	304.79	-541.44	0.00	0.00	0.00
3,000.00	17.46	29.35	2,909.00	568.18	319.50	-567.57	0.00	0.00	0.00
3,100.00	17.46	29.35	3,004.39	594.33	334.21	-593.69	0.00	0.00	0.00
3,200.00	17.46	29.35	3,099.78	620.49	348.91	-619.81	0.00	0.00	0.00
3,300.00	17.46	29.35	3,195.17	646.64	363.62	-645.94	0.00	0.00	0.00
3,400.00	17.46	29.35	3,290.57	672.79	378.33	-672.06	0.00	0.00	0.00
3,500.00	17.46	29.35	3,385.96	698.94	393.03	-698.19	0.00	0.00	0.00
3,600.00	17.46	29.35	3,481.35	725.10	407.74	-724.31	0.00	0.00	0.00
3,700.00	17.46	29.35	3,576.74	751.25	422.44	-750.44	0.00	0.00	0.00
3,800.00	17.46	29.35	3,672.14	777.40	437.15	-776.56	0.00	0.00	0.00
3,900.00	17.46	29.35	3,767.53	803.55	451.86	-802.69	0.00	0.00	0.00
4,000.00	17.46	29.35	3,862.92	829.71	466.56	-828.81	0.00	0.00	0.00
4,100.00	17.46	29.35	3,958.32	855.86	481.27	-854.93	0.00	0.00	0.00
4,200.00	17.46	29.35	4,053.71	882.01	495.98	-881.06	0.00	0.00	0.00
4,214.00	17.46	29.35	4,067.06	885.67	498.03	-884.72	0.00	0.00	0.00
Begin Drop @ 4214.00ft									
4,300.00	15.74	29.35	4,149.48	907.09	510.08	-906.11	2.00	-2.00	0.00

Corporate
Planning Report

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Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5135.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5135.00usft (Drilling Rig)
Site:	1N-66W-26 BEIERLE 2-26HZ PAD	North Reference:	True
Well:	BEIERLE 26-5HZ	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)
4,400.00	13.74	29.35	4,246.18	929.27	522.55	-928.26	2.00	-2.00	0.00
4,482.92	12.08	29.35	4,327.00	945.41	531.63	-944.39	2.00	-2.00	0.00
Parkman									
4,500.00	11.74	29.35	4,343.71	948.49	533.35	-947.46	2.00	-2.00	0.00
4,600.00	9.74	29.35	4,441.96	964.73	542.49	-963.69	2.00	-2.00	0.00
4,700.00	7.74	29.35	4,540.79	977.97	549.94	-976.92	2.00	-2.00	0.00
4,800.00	5.74	29.35	4,640.09	988.20	555.69	-987.13	2.00	-2.00	0.00
4,900.00	3.74	29.35	4,739.75	995.40	559.74	-994.33	2.00	-2.00	0.00
4,971.36	2.31	29.35	4,811.00	998.69	561.58	-997.61	2.00	-2.00	0.00
Sussex									
5,000.00	1.74	29.35	4,839.63	999.57	562.08	-998.49	2.00	-2.00	0.00
5,087.00	0.00	0.00	4,926.61	1,000.72	562.73	-999.64	2.00	-2.00	-33.74
End Drop @ 5087.00ft									
5,100.00	0.00	0.00	4,939.61	1,000.72	562.73	-999.64	0.00	0.00	0.00
5,200.00	0.00	0.00	5,039.61	1,000.72	562.73	-999.64	0.00	0.00	0.00
5,300.00	0.00	0.00	5,139.61	1,000.72	562.73	-999.64	0.00	0.00	0.00
5,400.00	0.00	0.00	5,239.61	1,000.72	562.73	-999.64	0.00	0.00	0.00
5,500.00	0.00	0.00	5,339.61	1,000.72	562.73	-999.64	0.00	0.00	0.00
5,600.00	0.00	0.00	5,439.61	1,000.72	562.73	-999.64	0.00	0.00	0.00
5,700.00	0.00	0.00	5,539.61	1,000.72	562.73	-999.64	0.00	0.00	0.00
5,800.00	0.00	0.00	5,639.61	1,000.72	562.73	-999.64	0.00	0.00	0.00
5,900.00	0.00	0.00	5,739.61	1,000.72	562.73	-999.64	0.00	0.00	0.00
6,000.00	0.00	0.00	5,839.61	1,000.72	562.73	-999.64	0.00	0.00	0.00
6,100.00	0.00	0.00	5,939.61	1,000.72	562.73	-999.64	0.00	0.00	0.00
6,200.00	0.00	0.00	6,039.61	1,000.72	562.73	-999.64	0.00	0.00	0.00
6,300.00	0.00	0.00	6,139.61	1,000.72	562.73	-999.64	0.00	0.00	0.00
6,400.00	0.00	0.00	6,239.61	1,000.72	562.73	-999.64	0.00	0.00	0.00
6,500.00	0.00	0.00	6,339.61	1,000.72	562.73	-999.64	0.00	0.00	0.00
6,600.00	0.00	0.00	6,439.61	1,000.72	562.73	-999.64	0.00	0.00	0.00
6,700.00	0.00	0.00	6,539.61	1,000.72	562.73	-999.64	0.00	0.00	0.00
6,800.00	0.00	0.00	6,639.61	1,000.72	562.73	-999.64	0.00	0.00	0.00
6,900.00	0.00	0.00	6,739.61	1,000.72	562.73	-999.64	0.00	0.00	0.00
7,000.00	0.00	0.00	6,839.61	1,000.72	562.73	-999.64	0.00	0.00	0.00
7,089.20	0.00	0.00	6,928.81	1,000.72	562.73	-999.64	0.00	0.00	0.00
KOP @ 7089.20ft :: DLS = 8°/100'									
7,100.00	0.86	179.89	6,939.61	1,000.64	562.73	-999.56	8.00	8.00	1,665.68
7,200.00	8.86	179.89	7,039.17	992.17	562.74	-991.09	8.00	8.00	0.00
7,300.00	16.86	179.89	7,136.58	969.92	562.79	-968.84	8.00	8.00	0.00
7,394.55	24.43	179.89	7,225.00	936.61	562.85	-935.53	8.00	8.00	0.00
Sharon Springs									
7,400.00	24.86	179.89	7,229.95	934.34	562.85	-933.26	8.00	8.00	0.00
7,411.12	25.75	179.89	7,240.00	929.59	562.86	-928.50	8.00	8.00	0.00
Niobrara									
7,500.00	32.86	179.89	7,317.46	886.10	562.94	-885.02	8.00	8.00	0.00
7,600.00	40.86	179.89	7,397.40	826.16	563.05	-825.08	8.00	8.00	0.00
7,651.36	44.97	179.89	7,435.00	791.20	563.12	-790.11	8.00	8.00	0.00
Nio B									
7,700.00	48.86	179.89	7,468.22	755.68	563.18	-754.59	8.00	8.00	0.00
7,755.38	53.29	179.89	7,503.00	712.60	563.26	-711.52	8.00	8.00	0.00
Nio C									
7,800.00	56.86	179.89	7,528.54	676.02	563.33	-674.94	8.00	8.00	0.00
7,900.00	64.86	179.89	7,577.19	588.74	563.49	-587.66	8.00	8.00	0.00
8,000.00	72.86	179.89	7,613.22	495.55	563.66	-494.46	8.00	8.00	0.00

Corporate Planning Report

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Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5135.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5135.00usft (Drilling Rig)
Site:	1N-66W-26 BEIERLE 2-26HZ PAD	North Reference:	True
Well:	BEIERLE 26-5HZ	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)	
8,100.00	80.86	179.89	7,635.93	398.24	563.84	-397.16	8.00	8.00	0.00	
8,200.00	88.86	179.89	7,644.87	298.73	564.03	-297.64	8.00	8.00	0.00	
8,209.84	89.65	179.89	7,645.00	288.89	564.05	-287.80	8.00	8.00	0.00	
End Build @ 8209.84ft - Top of Production										
8,300.00	89.65	179.89	7,645.55	198.73	564.21	-197.65	0.00	0.00	0.00	
8,400.00	89.65	179.89	7,646.15	98.73	564.40	-97.65	0.00	0.00	0.00	
8,500.00	89.65	179.89	7,646.76	-1.27	564.58	2.35	0.00	0.00	0.00	
8,600.00	89.65	179.89	7,647.37	-101.27	564.77	102.35	0.00	0.00	0.00	
8,700.00	89.65	179.89	7,647.98	-201.26	564.95	202.35	0.00	0.00	0.00	
8,800.00	89.65	179.89	7,648.59	-301.26	565.14	302.35	0.00	0.00	0.00	
8,867.85	89.65	179.89	7,649.00	-369.11	565.26	370.19	0.00	0.00	0.00	
Fort Hayes										
8,900.00	89.65	179.89	7,649.20	-401.26	565.32	402.34	0.00	0.00	0.00	
9,000.00	89.65	179.89	7,649.80	-501.26	565.51	502.34	0.00	0.00	0.00	
9,100.00	89.65	179.89	7,650.41	-601.26	565.69	602.34	0.00	0.00	0.00	
9,200.00	89.65	179.89	7,651.02	-701.25	565.88	702.34	0.00	0.00	0.00	
9,300.00	89.65	179.89	7,651.63	-801.25	566.06	802.34	0.00	0.00	0.00	
9,400.00	89.65	179.89	7,652.24	-901.25	566.25	902.33	0.00	0.00	0.00	
9,500.00	89.65	179.89	7,652.85	-1,001.25	566.43	1,002.33	0.00	0.00	0.00	
9,600.00	89.65	179.89	7,653.45	-1,101.25	566.62	1,102.33	0.00	0.00	0.00	
9,700.00	89.65	179.89	7,654.06	-1,201.24	566.80	1,202.33	0.00	0.00	0.00	
9,800.00	89.65	179.89	7,654.67	-1,301.24	566.99	1,302.33	0.00	0.00	0.00	
9,900.00	89.65	179.89	7,655.28	-1,401.24	567.17	1,402.33	0.00	0.00	0.00	
10,000.00	89.65	179.89	7,655.89	-1,501.24	567.36	1,502.32	0.00	0.00	0.00	
10,100.00	89.65	179.89	7,656.49	-1,601.24	567.54	1,602.32	0.00	0.00	0.00	
10,200.00	89.65	179.89	7,657.10	-1,701.23	567.73	1,702.32	0.00	0.00	0.00	
10,300.00	89.65	179.89	7,657.71	-1,801.23	567.91	1,802.32	0.00	0.00	0.00	
10,400.00	89.65	179.89	7,658.32	-1,901.23	568.10	1,902.32	0.00	0.00	0.00	
10,500.00	89.65	179.89	7,658.93	-2,001.23	568.28	2,002.31	0.00	0.00	0.00	
10,600.00	89.65	179.89	7,659.54	-2,101.22	568.47	2,102.31	0.00	0.00	0.00	
10,700.00	89.65	179.89	7,660.14	-2,201.22	568.65	2,202.31	0.00	0.00	0.00	
10,800.00	89.65	179.89	7,660.75	-2,301.22	568.84	2,302.31	0.00	0.00	0.00	
10,900.00	89.65	179.89	7,661.36	-2,401.22	569.03	2,402.31	0.00	0.00	0.00	
11,000.00	89.65	179.89	7,661.97	-2,501.22	569.21	2,502.31	0.00	0.00	0.00	
11,100.00	89.65	179.89	7,662.58	-2,601.21	569.40	2,602.30	0.00	0.00	0.00	
11,200.00	89.65	179.89	7,663.19	-2,701.21	569.58	2,702.30	0.00	0.00	0.00	
11,300.00	89.65	179.89	7,663.79	-2,801.21	569.77	2,802.30	0.00	0.00	0.00	
11,400.00	89.65	179.89	7,664.40	-2,901.21	569.95	2,902.30	0.00	0.00	0.00	
11,500.00	89.65	179.89	7,665.01	-3,001.21	570.14	3,002.30	0.00	0.00	0.00	
11,600.00	89.65	179.89	7,665.62	-3,101.20	570.32	3,102.29	0.00	0.00	0.00	
11,700.00	89.65	179.89	7,666.23	-3,201.20	570.51	3,202.29	0.00	0.00	0.00	
11,800.00	89.65	179.89	7,666.84	-3,301.20	570.69	3,302.29	0.00	0.00	0.00	
11,900.00	89.65	179.89	7,667.44	-3,401.20	570.88	3,402.29	0.00	0.00	0.00	
12,000.00	89.65	179.89	7,668.05	-3,501.20	571.06	3,502.29	0.00	0.00	0.00	
12,100.00	89.65	179.89	7,668.66	-3,601.19	571.25	3,602.28	0.00	0.00	0.00	
12,200.00	89.65	179.89	7,669.27	-3,701.19	571.43	3,702.28	0.00	0.00	0.00	
12,300.00	89.65	179.89	7,669.88	-3,801.19	571.62	3,802.28	0.00	0.00	0.00	
12,400.00	89.65	179.89	7,670.48	-3,901.19	571.80	3,902.28	0.00	0.00	0.00	
12,484.77	89.65	179.89	7,671.00	-3,985.96	571.96	3,987.05	0.00	0.00	0.00	
Codell										
12,500.00	89.65	179.89	7,671.09	-4,001.19	571.99	4,002.28	0.00	0.00	0.00	
12,600.00	89.65	179.89	7,671.70	-4,101.18	572.17	4,102.28	0.00	0.00	0.00	
12,700.00	89.65	179.89	7,672.31	-4,201.18	572.36	4,202.27	0.00	0.00	0.00	

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BEIERLE 26-5HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 5135.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 5135.00usft (Drilling Rig)
Site:	1N-66W-26 BEIERLE 2-26HZ PAD	North Reference:	True
Well:	BEIERLE 26-5HZ	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)
12,800.00	89.65	179.89	7,672.92	-4,301.18	572.54	4,302.27	0.00	0.00	0.00
12,900.00	89.65	179.89	7,673.53	-4,401.18	572.73	4,402.27	0.00	0.00	0.00
12,977.99	89.65	179.89	7,674.00	-4,479.17	572.87	4,480.26	0.00	0.00	0.00
TD Well @ 12977.99ft									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,522.95	1,500.00	9 5/8" Csg	9-5/8	13-1/2	
8,209.84	7,645.00	Top of Production	5-1/2	7-7/8	

Formations					
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,811.23	1,775.00	Fox Hills			
4,482.92	4,327.00	Parkman			
4,971.36	4,811.00	Sussex			
7,394.55	7,225.00	Sharon Springs			
7,411.12	7,240.00	Niobrara			
7,651.36	7,435.00	Nio B			
7,755.38	7,503.00	Nio C			
8,867.85	7,649.00	Fort Hayes			
12,484.77	7,671.00	Codell			

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
250.00	250.00	0.00	0.00	Begin Nudge @ 250.00ft
1,414.00	1,396.07	153.40	86.26	End Nudge @ 1414.00ft
4,214.00	4,067.06	885.67	498.03	Begin Drop @ 4214.00ft
5,087.00	4,926.61	1,000.72	562.73	End Drop @ 5087.00ft
7,089.20	6,928.81	1,000.72	562.73	KOP @ 7089.20ft :: DLS = 8°/100'
8,209.84	7,645.00	288.88	564.05	End Build @ 8209.84ft
12,977.99	7,674.00	-4,479.17	572.87	TD Well @ 12977.99ft