

US ROCKIES WATTENBERG PLANNING

WELD-NAD83-UTMFT13N

2N-68W-15 Camenisch 7-15 Pad

CAMENISCH 36N-22HZ

Plan A

Plan: Permit Rev-1

Standard Planning Report

22 September, 2015

Project: WELD-NAD83-UTMFT13N
Site: 2N-68W-15 Camenisch 7-15 Pad
Well: CAMENISCH 36N-22HZ
Wellbore: Plan A
Design: Permit Rev-1

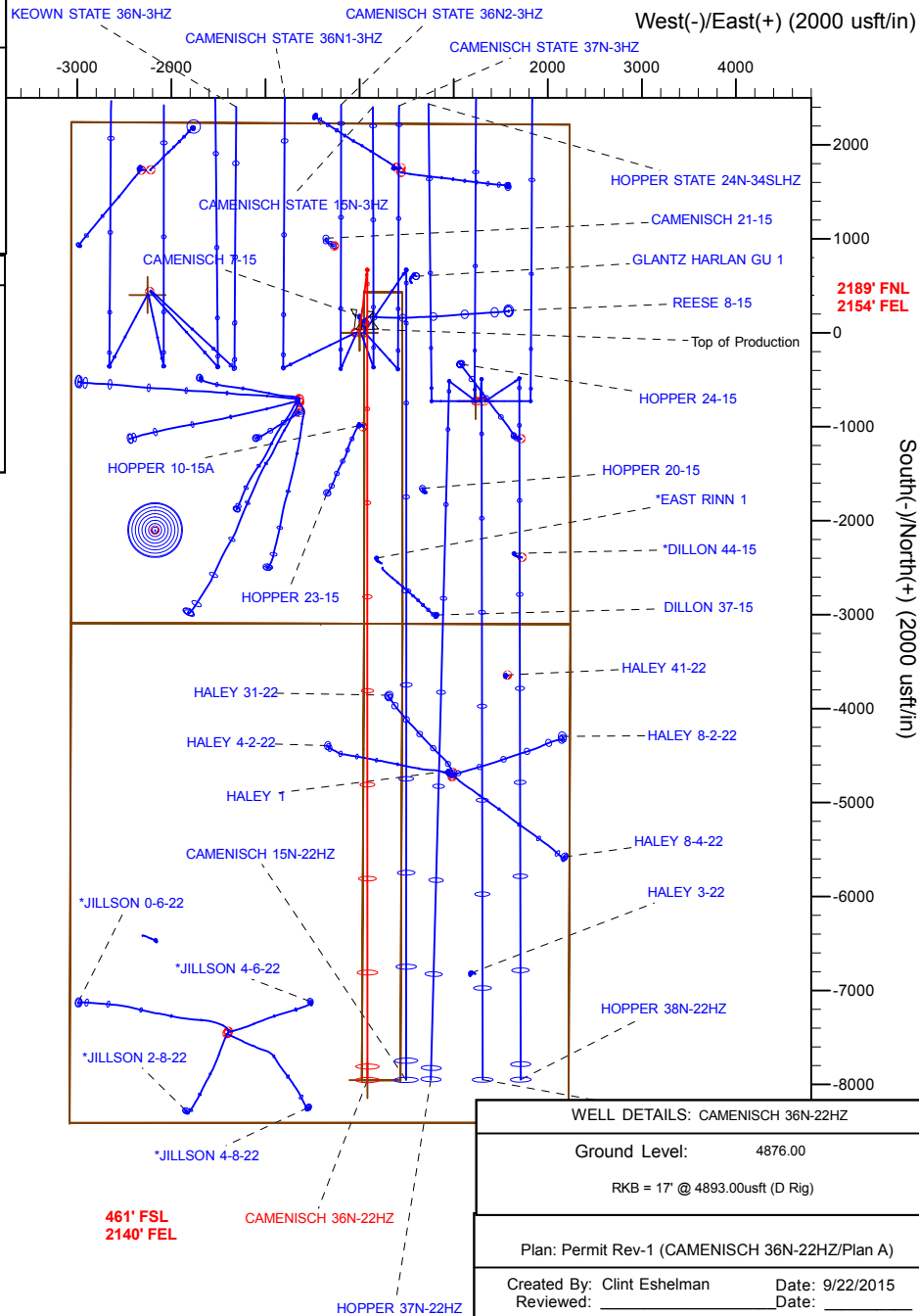
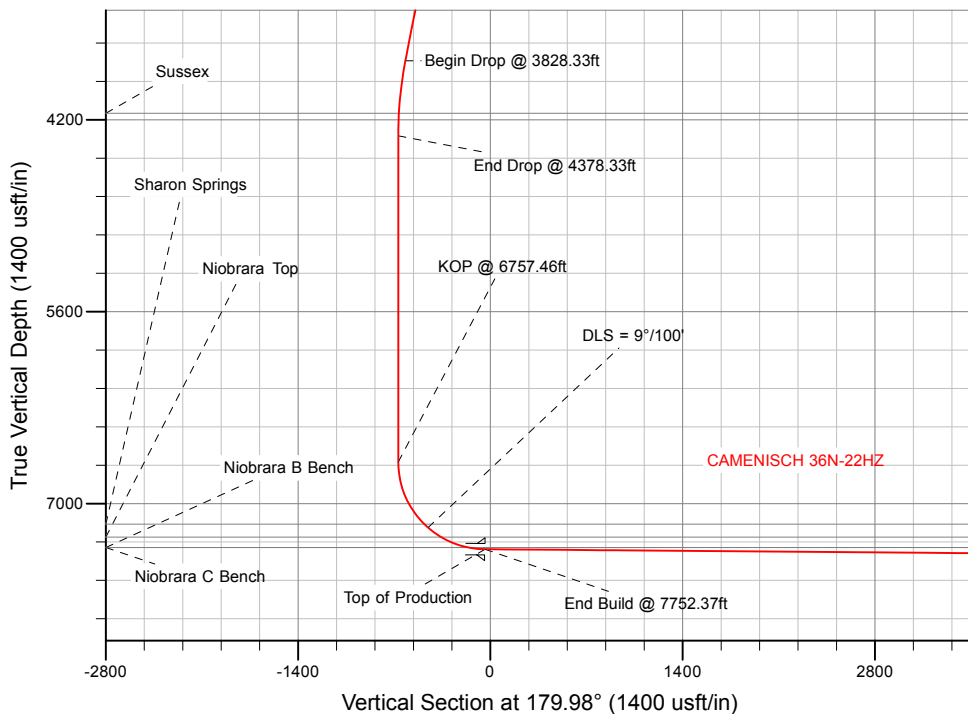
US ROCKIES WATTENBERG PLANNING

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	933.33	11.00	7.00	928.84	69.66	8.55	1.50	7.00	-69.65	
4	3828.33	11.00	7.00	3770.65	617.93	75.87	0.00	0.00	-617.90	
5	4378.33	0.00	0.00	4317.27	670.17	82.29	2.00	-180.00	-670.14	
6	6757.46	0.00	0.00	6696.40	670.17	82.29	0.00	0.00	-670.14	
7	7752.37	89.54	179.98	7333.00	38.65	82.47	9.00	179.98	-38.62	
8	15743.91	89.54	179.98	7397.00	-7952.64	84.79	0.00	0.00	7952.67	CAMENISCH 36N-22HZ_TOE

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
CAMENISCH 36N-22HZ_SHL	0.00	0.00	0.00	40.139980	-104.987767	Point
CAMENISCH 36N-22HZ_TOE	7397.00	-7952.64	84.79	40.118141	-104.987464	Point



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Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well CAMENISCH 36N-22HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4893.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4893.00usft (D Rig)
Site:	2N-68W-15 Camenisch 7-15 Pad	North Reference:	True
Well:	CAMENISCH 36N-22HZ	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		2N-68W-15 Camenisch 7-15 Pad			
Site Position:		Northing:	14,577,706.69 usft	Latitude:	40.139980
From:	Lat/Long	Easting:	1,643,790.52 usft	Longitude:	-104.987928
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.01 °

Well	CAMENISCH 36N-22HZ					
Well Position	+N/-S	0.00 usft	Northing:	14,577,706.70 usft	Latitude:	40.139980
	+E/-W	45.00 usft	Easting:	1,643,835.52 usft	Longitude:	-104.987767
Position Uncertainty		3.28 usft	Wellhead Elevation:	0.00 usft	Ground Level:	4,876.00 usft

Wellbore	Plan A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/22/2015	8.39	66.66	52,521

Design	Permit Rev-1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	179.98

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	
933.33	11.00	7.00	928.84	69.66	8.55	1.50	1.50	0.00	7.00	
3,828.33	11.00	7.00	3,770.65	617.93	75.87	0.00	0.00	0.00	0.00	
4,378.33	0.00	0.00	4,317.27	670.17	82.29	2.00	-2.00	-1.27	-180.00	
6,757.46	0.00	0.00	6,696.40	670.17	82.29	0.00	0.00	0.00	0.00	
7,752.37	89.54	179.98	7,333.00	38.65	82.47	9.00	9.00	18.09	179.98	
15,743.91	89.54	179.98	7,397.00	-7,952.64	84.79	0.00	0.00	0.00	0.00	CAMENISCH 36N-22

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Planning Report

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Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4893.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4893.00usft (D Rig)
Site:	2N-68W-15 Camenisch 7-15 Pad	North Reference:	True
Well:	CAMENISCH 36N-22HZ	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	7.00	299.99	1.30	0.16	-1.30	1.50	1.50	0.00
400.00	3.00	7.00	399.91	5.20	0.64	-5.20	1.50	1.50	0.00
500.00	4.50	7.00	499.69	11.69	1.44	-11.69	1.50	1.50	0.00
600.00	6.00	7.00	599.27	20.77	2.55	-20.77	1.50	1.50	0.00
700.00	7.50	7.00	698.57	32.43	3.98	-32.43	1.50	1.50	0.00
800.00	9.00	7.00	797.54	46.68	5.73	-46.67	1.50	1.50	0.00
819.61	9.29	7.00	816.90	49.77	6.11	-49.77	1.50	1.50	0.00
Fox Hills									
900.00	10.50	7.00	896.09	63.48	7.79	-63.48	1.50	1.50	0.00
933.33	11.00	7.00	928.83	69.66	8.55	-69.65	1.50	1.50	0.00
End Nudge @ 933.33ft									
1,000.00	11.00	7.00	994.28	82.28	10.10	-82.28	0.00	0.00	0.00
1,100.00	11.00	7.00	1,092.44	101.22	12.43	-101.22	0.00	0.00	0.00
1,200.00	11.00	7.00	1,190.60	120.16	14.75	-120.15	0.00	0.00	0.00
1,300.00	11.00	7.00	1,288.77	139.10	17.08	-139.09	0.00	0.00	0.00
1,400.00	11.00	7.00	1,386.93	158.04	19.40	-158.03	0.00	0.00	0.00
1,500.00	11.00	7.00	1,485.09	176.98	21.73	-176.97	0.00	0.00	0.00
1,600.00	11.00	7.00	1,583.25	195.91	24.06	-195.91	0.00	0.00	0.00
1,700.00	11.00	7.00	1,681.42	214.85	26.38	-214.84	0.00	0.00	0.00
1,800.00	11.00	7.00	1,779.58	233.79	28.71	-233.78	0.00	0.00	0.00
1,820.80	11.00	7.00	1,800.00	237.73	29.19	-237.72	0.00	0.00	0.00
9 5/8"									
1,900.00	11.00	7.00	1,877.74	252.73	31.03	-252.72	0.00	0.00	0.00
2,000.00	11.00	7.00	1,975.91	271.67	33.36	-271.66	0.00	0.00	0.00
2,100.00	11.00	7.00	2,074.07	290.61	35.68	-290.59	0.00	0.00	0.00
2,200.00	11.00	7.00	2,172.23	309.55	38.01	-309.53	0.00	0.00	0.00
2,300.00	11.00	7.00	2,270.39	328.48	40.33	-328.47	0.00	0.00	0.00
2,400.00	11.00	7.00	2,368.56	347.42	42.66	-347.41	0.00	0.00	0.00
2,500.00	11.00	7.00	2,466.72	366.36	44.98	-366.35	0.00	0.00	0.00
2,600.00	11.00	7.00	2,564.88	385.30	47.31	-385.28	0.00	0.00	0.00
2,700.00	11.00	7.00	2,663.04	404.24	49.63	-404.22	0.00	0.00	0.00
2,800.00	11.00	7.00	2,761.21	423.18	51.96	-423.16	0.00	0.00	0.00
2,900.00	11.00	7.00	2,859.37	442.12	54.29	-442.10	0.00	0.00	0.00
3,000.00	11.00	7.00	2,957.53	461.06	56.61	-461.04	0.00	0.00	0.00
3,100.00	11.00	7.00	3,055.70	479.99	58.94	-479.97	0.00	0.00	0.00
3,200.00	11.00	7.00	3,153.86	498.93	61.26	-498.91	0.00	0.00	0.00
3,300.00	11.00	7.00	3,252.02	517.87	63.59	-517.85	0.00	0.00	0.00
3,400.00	11.00	7.00	3,350.18	536.81	65.91	-536.79	0.00	0.00	0.00
3,500.00	11.00	7.00	3,448.35	555.75	68.24	-555.72	0.00	0.00	0.00
3,600.00	11.00	7.00	3,546.51	574.69	70.56	-574.66	0.00	0.00	0.00
3,700.00	11.00	7.00	3,644.67	593.63	72.89	-593.60	0.00	0.00	0.00
3,800.00	11.00	7.00	3,742.83	612.56	75.21	-612.54	0.00	0.00	0.00
3,828.33	11.00	7.00	3,770.64	617.93	75.87	-617.90	0.00	0.00	0.00
Begin Drop @ 3828.33ft									
3,900.00	9.57	7.00	3,841.16	630.63	77.43	-630.60	2.00	-2.00	0.00
4,000.00	7.57	7.00	3,940.04	645.41	79.25	-645.38	2.00	-2.00	0.00
4,100.00	5.57	7.00	4,039.38	656.76	80.64	-656.73	2.00	-2.00	0.00
4,200.00	3.57	7.00	4,139.06	664.66	81.61	-664.64	2.00	-2.00	0.00
4,213.97	3.29	7.00	4,153.00	665.49	81.71	-665.47	2.00	-2.00	0.00

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Planning Report

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Well:	CAMENISCH 36N-22HZ	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	1.57	7.00	4,238.95	669.11	82.16	-669.08	2.00	-2.00	0.00
4,378.33	0.00	6.87	4,317.27	670.17	82.29	-670.14	2.00	-2.00	-0.16
End Drop @ 4378.33ft									
4,400.00	0.00	0.00	4,338.94	670.17	82.29	-670.14	0.00	0.00	-31.72
4,500.00	0.00	0.00	4,438.94	670.17	82.29	-670.14	0.00	0.00	0.00
4,600.00	0.00	0.00	4,538.94	670.17	82.29	-670.14	0.00	0.00	0.00
4,700.00	0.00	0.00	4,638.94	670.17	82.29	-670.14	0.00	0.00	0.00
4,800.00	0.00	0.00	4,738.94	670.17	82.29	-670.14	0.00	0.00	0.00
4,900.00	0.00	0.00	4,838.94	670.17	82.29	-670.14	0.00	0.00	0.00
5,000.00	0.00	0.00	4,938.94	670.17	82.29	-670.14	0.00	0.00	0.00
5,100.00	0.00	0.00	5,038.94	670.17	82.29	-670.14	0.00	0.00	0.00
5,200.00	0.00	0.00	5,138.94	670.17	82.29	-670.14	0.00	0.00	0.00
5,300.00	0.00	0.00	5,238.94	670.17	82.29	-670.14	0.00	0.00	0.00
5,400.00	0.00	0.00	5,338.94	670.17	82.29	-670.14	0.00	0.00	0.00
5,500.00	0.00	0.00	5,438.94	670.17	82.29	-670.14	0.00	0.00	0.00
5,600.00	0.00	0.00	5,538.94	670.17	82.29	-670.14	0.00	0.00	0.00
5,700.00	0.00	0.00	5,638.94	670.17	82.29	-670.14	0.00	0.00	0.00
5,800.00	0.00	0.00	5,738.94	670.17	82.29	-670.14	0.00	0.00	0.00
5,900.00	0.00	0.00	5,838.94	670.17	82.29	-670.14	0.00	0.00	0.00
6,000.00	0.00	0.00	5,938.94	670.17	82.29	-670.14	0.00	0.00	0.00
6,100.00	0.00	0.00	6,038.94	670.17	82.29	-670.14	0.00	0.00	0.00
6,200.00	0.00	0.00	6,138.94	670.17	82.29	-670.14	0.00	0.00	0.00
6,300.00	0.00	0.00	6,238.94	670.17	82.29	-670.14	0.00	0.00	0.00
6,400.00	0.00	0.00	6,338.94	670.17	82.29	-670.14	0.00	0.00	0.00
6,500.00	0.00	0.00	6,438.94	670.17	82.29	-670.14	0.00	0.00	0.00
6,600.00	0.00	0.00	6,538.94	670.17	82.29	-670.14	0.00	0.00	0.00
6,700.00	0.00	0.00	6,638.94	670.17	82.29	-670.14	0.00	0.00	0.00
6,757.46	0.00	0.00	6,696.40	670.17	82.29	-670.14	0.00	0.00	0.00
KOP @ 6757.46ft									
6,800.00	3.83	179.98	6,738.91	668.75	82.29	-668.72	9.00	9.00	423.09
6,900.00	12.83	179.98	6,837.75	654.28	82.29	-654.25	9.00	9.00	0.00
7,000.00	21.83	179.98	6,933.12	624.53	82.30	-624.50	9.00	9.00	0.00
7,100.00	30.83	179.98	7,022.65	580.22	82.31	-580.19	9.00	9.00	0.00
7,200.00	39.83	179.98	7,104.15	522.46	82.33	-522.43	9.00	9.00	0.00
7,262.91	45.49	179.98	7,150.40	479.84	82.34	-479.81	9.00	9.00	0.00
Sharon Springs									
7,300.00	48.83	179.98	7,175.61	452.65	82.35	-452.62	9.00	9.00	0.00
DLS = 9°/100'									
7,400.00	57.83	179.98	7,235.28	372.53	82.37	-372.50	9.00	9.00	0.00
7,419.49	59.58	179.98	7,245.40	355.87	82.38	-355.84	9.00	9.00	0.00
Niobrara Top									
7,500.00	66.83	179.98	7,281.67	284.05	82.40	-284.03	9.00	9.00	0.00
7,600.00	75.83	179.98	7,313.65	189.42	82.43	-189.39	9.00	9.00	0.00
7,628.47	78.39	179.98	7,320.00	161.67	82.43	-161.64	9.00	9.00	0.00
Niobrara B Bench - Niobrara C Bench									
7,700.00	84.83	179.98	7,330.43	90.94	82.45	-90.91	9.00	9.00	0.00
7,752.37	89.54	179.98	7,333.00	38.65	82.47	-38.62	9.00	9.00	0.00
End Build @ 7752.37ft - Top of Production									
7,800.00	89.54	179.98	7,333.39	-8.98	82.48	9.01	0.00	0.00	0.00
7,900.00	89.54	179.98	7,334.19	-108.98	82.51	109.01	0.00	0.00	0.00
8,000.00	89.54	179.98	7,334.99	-208.98	82.54	209.00	0.00	0.00	0.00
8,100.00	89.54	179.98	7,335.79	-308.97	82.57	309.00	0.00	0.00	0.00

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Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4893.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4893.00usft (D Rig)
Site:	2N-68W-15 Camenisch 7-15 Pad	North Reference:	True
Well:	CAMENISCH 36N-22HZ	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)
8,200.00	89.54	179.98	7,336.59	-408.97	82.60	409.00	0.00	0.00	0.00
8,300.00	89.54	179.98	7,337.39	-508.97	82.63	509.00	0.00	0.00	0.00
8,400.00	89.54	179.98	7,338.19	-608.96	82.66	608.99	0.00	0.00	0.00
8,500.00	89.54	179.98	7,338.99	-708.96	82.69	708.99	0.00	0.00	0.00
8,600.00	89.54	179.98	7,339.79	-808.96	82.72	808.99	0.00	0.00	0.00
8,700.00	89.54	179.98	7,340.59	-908.95	82.75	908.98	0.00	0.00	0.00
8,800.00	89.54	179.98	7,341.39	-1,008.95	82.77	1,008.98	0.00	0.00	0.00
8,900.00	89.54	179.98	7,342.19	-1,108.95	82.80	1,108.98	0.00	0.00	0.00
9,000.00	89.54	179.98	7,343.00	-1,208.94	82.83	1,208.97	0.00	0.00	0.00
9,100.00	89.54	179.98	7,343.80	-1,308.94	82.86	1,308.97	0.00	0.00	0.00
9,200.00	89.54	179.98	7,344.60	-1,408.94	82.89	1,408.97	0.00	0.00	0.00
9,300.00	89.54	179.98	7,345.40	-1,508.93	82.92	1,508.96	0.00	0.00	0.00
9,400.00	89.54	179.98	7,346.20	-1,608.93	82.95	1,608.96	0.00	0.00	0.00
9,500.00	89.54	179.98	7,347.00	-1,708.93	82.98	1,708.96	0.00	0.00	0.00
9,600.00	89.54	179.98	7,347.80	-1,808.92	83.01	1,808.95	0.00	0.00	0.00
9,700.00	89.54	179.98	7,348.60	-1,908.92	83.04	1,908.95	0.00	0.00	0.00
9,800.00	89.54	179.98	7,349.40	-2,008.92	83.06	2,008.95	0.00	0.00	0.00
9,900.00	89.54	179.98	7,350.20	-2,108.92	83.09	2,108.94	0.00	0.00	0.00
10,000.00	89.54	179.98	7,351.00	-2,208.91	83.12	2,208.94	0.00	0.00	0.00
10,100.00	89.54	179.98	7,351.80	-2,308.91	83.15	2,308.94	0.00	0.00	0.00
10,200.00	89.54	179.98	7,352.60	-2,408.91	83.18	2,408.93	0.00	0.00	0.00
10,300.00	89.54	179.98	7,353.41	-2,508.90	83.21	2,508.93	0.00	0.00	0.00
10,400.00	89.54	179.98	7,354.21	-2,608.90	83.24	2,608.93	0.00	0.00	0.00
10,500.00	89.54	179.98	7,355.01	-2,708.90	83.27	2,708.92	0.00	0.00	0.00
10,600.00	89.54	179.98	7,355.81	-2,808.89	83.30	2,808.92	0.00	0.00	0.00
10,700.00	89.54	179.98	7,356.61	-2,908.89	83.33	2,908.92	0.00	0.00	0.00
10,800.00	89.54	179.98	7,357.41	-3,008.89	83.35	3,008.92	0.00	0.00	0.00
10,900.00	89.54	179.98	7,358.21	-3,108.88	83.38	3,108.91	0.00	0.00	0.00
11,000.00	89.54	179.98	7,359.01	-3,208.88	83.41	3,208.91	0.00	0.00	0.00
11,100.00	89.54	179.98	7,359.81	-3,308.88	83.44	3,308.91	0.00	0.00	0.00
11,200.00	89.54	179.98	7,360.61	-3,408.87	83.47	3,408.90	0.00	0.00	0.00
11,300.00	89.54	179.98	7,361.41	-3,508.87	83.50	3,508.90	0.00	0.00	0.00
11,400.00	89.54	179.98	7,362.21	-3,608.87	83.53	3,608.90	0.00	0.00	0.00
11,500.00	89.54	179.98	7,363.02	-3,708.86	83.56	3,708.89	0.00	0.00	0.00
11,600.00	89.54	179.98	7,363.82	-3,808.86	83.59	3,808.89	0.00	0.00	0.00
11,700.00	89.54	179.98	7,364.62	-3,908.86	83.62	3,908.89	0.00	0.00	0.00
11,800.00	89.54	179.98	7,365.42	-4,008.85	83.65	4,008.88	0.00	0.00	0.00
11,900.00	89.54	179.98	7,366.22	-4,108.85	83.67	4,108.88	0.00	0.00	0.00
12,000.00	89.54	179.98	7,367.02	-4,208.85	83.70	4,208.88	0.00	0.00	0.00
12,100.00	89.54	179.98	7,367.82	-4,308.84	83.73	4,308.87	0.00	0.00	0.00
12,200.00	89.54	179.98	7,368.62	-4,408.84	83.76	4,408.87	0.00	0.00	0.00
12,300.00	89.54	179.98	7,369.42	-4,508.84	83.79	4,508.87	0.00	0.00	0.00
12,400.00	89.54	179.98	7,370.22	-4,608.83	83.82	4,608.86	0.00	0.00	0.00
12,500.00	89.54	179.98	7,371.02	-4,708.83	83.85	4,708.86	0.00	0.00	0.00
12,600.00	89.54	179.98	7,371.82	-4,808.83	83.88	4,808.86	0.00	0.00	0.00
12,700.00	89.54	179.98	7,372.62	-4,908.83	83.91	4,908.85	0.00	0.00	0.00
12,800.00	89.54	179.98	7,373.43	-5,008.82	83.94	5,008.85	0.00	0.00	0.00
12,900.00	89.54	179.98	7,374.23	-5,108.82	83.96	5,108.85	0.00	0.00	0.00
13,000.00	89.54	179.98	7,375.03	-5,208.82	83.99	5,208.84	0.00	0.00	0.00
13,100.00	89.54	179.98	7,375.83	-5,308.81	84.02	5,308.84	0.00	0.00	0.00
13,200.00	89.54	179.98	7,376.63	-5,408.81	84.05	5,408.84	0.00	0.00	0.00
13,300.00	89.54	179.98	7,377.43	-5,508.81	84.08	5,508.84	0.00	0.00	0.00
13,400.00	89.54	179.98	7,378.23	-5,608.80	84.11	5,608.83	0.00	0.00	0.00
13,500.00	89.54	179.98	7,379.03	-5,708.80	84.14	5,708.83	0.00	0.00	0.00

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Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well CAMENISCH 36N-22HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4893.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4893.00usft (D Rig)
Site:	2N-68W-15 Camenisch 7-15 Pad	North Reference:	True
Well:	CAMENISCH 36N-22HZ	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)
13,600.00	89.54	179.98	7,379.83	-5,808.80	84.17	5,808.83	0.00	0.00	0.00
13,700.00	89.54	179.98	7,380.63	-5,908.79	84.20	5,908.82	0.00	0.00	0.00
13,800.00	89.54	179.98	7,381.43	-6,008.79	84.23	6,008.82	0.00	0.00	0.00
13,900.00	89.54	179.98	7,382.23	-6,108.79	84.25	6,108.82	0.00	0.00	0.00
14,000.00	89.54	179.98	7,383.04	-6,208.78	84.28	6,208.81	0.00	0.00	0.00
14,100.00	89.54	179.98	7,383.84	-6,308.78	84.31	6,308.81	0.00	0.00	0.00
14,200.00	89.54	179.98	7,384.64	-6,408.78	84.34	6,408.81	0.00	0.00	0.00
14,300.00	89.54	179.98	7,385.44	-6,508.77	84.37	6,508.80	0.00	0.00	0.00
14,400.00	89.54	179.98	7,386.24	-6,608.77	84.40	6,608.80	0.00	0.00	0.00
14,500.00	89.54	179.98	7,387.04	-6,708.77	84.43	6,708.80	0.00	0.00	0.00
14,600.00	89.54	179.98	7,387.84	-6,808.76	84.46	6,808.79	0.00	0.00	0.00
14,700.00	89.54	179.98	7,388.64	-6,908.76	84.49	6,908.79	0.00	0.00	0.00
14,800.00	89.54	179.98	7,389.44	-7,008.76	84.52	7,008.79	0.00	0.00	0.00
14,900.00	89.54	179.98	7,390.24	-7,108.75	84.55	7,108.78	0.00	0.00	0.00
15,000.00	89.54	179.98	7,391.04	-7,208.75	84.57	7,208.78	0.00	0.00	0.00
15,100.00	89.54	179.98	7,391.84	-7,308.75	84.60	7,308.78	0.00	0.00	0.00
15,200.00	89.54	179.98	7,392.64	-7,408.75	84.63	7,408.77	0.00	0.00	0.00
15,300.00	89.54	179.98	7,393.45	-7,508.74	84.66	7,508.77	0.00	0.00	0.00
15,400.00	89.54	179.98	7,394.25	-7,608.74	84.69	7,608.77	0.00	0.00	0.00
15,500.00	89.54	179.98	7,395.05	-7,708.74	84.72	7,708.76	0.00	0.00	0.00
15,600.00	89.54	179.98	7,395.85	-7,808.73	84.75	7,808.76	0.00	0.00	0.00
15,700.00	89.54	179.98	7,396.65	-7,908.73	84.78	7,908.76	0.00	0.00	0.00
15,743.91	89.54	179.98	7,397.00	-7,952.64	84.79	7,952.67	0.00	0.00	0.00
TD Well @ 15743.91ft									

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Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well CAMENISCH 36N-22HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4893.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4893.00usft (D Rig)
Site:	2N-68W-15 Camenisch 7-15 Pad	North Reference:	True
Well:	CAMENISCH 36N-22HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(usft)		
CAMENISCH 36N-22HZ	0.00	0.00	0.00	0.00	0.00	14,577,706.70	1,643,835.52	40.139980	-104.987767
- plan hits target center									
- Point									
CAMENISCH 36N-22HZ	0.00	0.00	0.00	0.00	0.00	14,577,706.70	1,643,835.52	40.139980	-104.987767
- plan hits target center									
- Polygon									
Point 1			0.00	-441.08	454.73	14,577,265.68	1,644,290.31		
Point 2			0.00	-1,770.05	455.85	14,575,936.71	1,644,291.61		
Point 3			0.00	-3,099.03	456.99	14,574,607.73	1,644,292.94		
Point 4			0.00	-4,425.84	450.00	14,573,280.92	1,644,286.13		
Point 5			0.00	-5,752.67	443.01	14,571,954.09	1,644,279.32		
Point 6			0.00	-7,083.42	438.16	14,570,623.34	1,644,274.66		
Point 7			0.00	-7,954.16	434.99	14,569,752.60	1,644,271.61		
Point 8			0.00	-7,955.64	25.90	14,569,751.06	1,643,862.52		
Point 9			0.00	-7,083.95	29.15	14,570,622.75	1,643,865.65		
Point 10			0.00	-5,752.25	34.13	14,571,954.45	1,643,870.44		
Point 11			0.00	-4,425.08	42.01	14,573,281.62	1,643,878.14		
Point 12			0.00	-3,097.91	49.89	14,574,608.79	1,643,885.84		
Point 13			0.00	-1,769.14	49.38	14,575,937.56	1,643,885.14		
Point 14			0.00	-440.36	48.88	14,577,266.34	1,643,884.46		
Point 15			0.00	433.49	47.54	14,578,140.19	1,643,883.00		
Point 16			0.00	432.18	452.93	14,578,138.94	1,644,288.39		
Point 17			0.00	-441.08	454.73	14,577,265.68	1,644,290.31		
2N-R68W-Sec. 15_Secti	0.00	0.00	4.00	403.58	-2,253.96	14,578,109.97	1,641,581.51	40.141088	-104.995832
- plan misses target center by 2289.80usft at 4.00usft MD (4.00 TVD, 0.00 N, 0.00 E)									
- Polygon									
Point 1			4.00	1,838.97	-809.58	14,579,948.83	1,640,771.68		
Point 2			4.00	1,825.91	1,838.52	14,579,936.13	1,643,419.78		
Point 3			4.00	1,813.87	4,487.46	14,579,924.46	1,646,068.72		
Point 4			4.00	-845.15	4,491.86	14,577,265.44	1,646,073.49		
Point 5			4.00	-3,504.52	4,495.41	14,574,606.07	1,646,077.40		
Point 6			4.00	-3,497.58	1,841.43	14,574,612.64	1,643,423.42		
Point 7			4.00	-3,492.17	-813.11	14,574,617.69	1,640,768.88		
Point 8			4.00	-835.71	-811.34	14,577,274.15	1,640,770.28		
2N-R68W-Sec. 22_Secti	0.00	0.00	-17.00	-726.45	1,235.61	14,576,980.42	1,645,071.23	40.137985	-104.983346
- plan misses target center by 1433.44usft at 0.00usft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Polygon									
Point 1			-17.00	-2,361.86	-4,303.11	14,574,617.97	1,640,768.45		
Point 2			-17.00	-2,367.64	-1,648.57	14,574,612.55	1,643,422.99		
Point 3			-17.00	-2,374.95	1,005.41	14,574,605.61	1,646,076.97		
Point 4			-17.00	-7,681.33	986.34	14,569,299.23	1,646,058.63		
Point 5			-17.00	-7,682.80	-4,316.88	14,569,297.03	1,640,755.41		
CAMENISCH 36N-22HZ	0.00	0.00	7,397.00	-7,952.64	84.79	14,569,754.07	1,643,921.41	40.118141	-104.987464
- plan hits target center									
- Point									

Casing Points					
	Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
	1,820.80	1,800.00	9 5/8"	9-5/8	13-1/2
	7,752.37	7,333.00	Top of Production	5-1/2	7-7/8

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Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well CAMENISCH 36N-22HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4893.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4893.00usft (D Rig)
Site:	2N-68W-15 Camenisch 7-15 Pad	North Reference:	True
Well:	CAMENISCH 36N-22HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
819.61	816.90	Fox Hills				
4,213.97	4,153.00	Sussex				
7,262.91	7,150.40	Sharon Springs				
7,419.49	7,245.40	Niobrara Top				
7,628.47	7,320.00	Niobrara B Bench				
7,628.47	7,320.00	Niobrara C Bench				

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
933.33	928.83	69.66	8.55		End Nudge @ 933.33ft
3,828.33	3,770.64	617.93	75.87		Begin Drop @ 3828.33ft
4,378.33	4,317.27	670.17	82.29		End Drop @ 4378.33ft
6,757.46	6,696.40	670.17	82.29		KOP @ 6757.46ft
7,300.00	7,175.61	452.65	82.35		DLS = 9°/100'
7,752.37	7,333.00	38.65	82.47		End Build @ 7752.37ft
15,743.91	7,397.00	-7,952.64	84.79		TD Well @ 15743.91ft