

US ROCKIES WATTENBERG PLANNING

WELD-NAD83-UTMFT13N

3N-66W-28 BARCLAY FARMS 37-28HZ PAD

BARCLAY FARMS 28-7HZ

Plan A

Plan: Permit Rev-1

SHL Lat/Long: 40.202396/-104.776056

Survey Program: MWD+IFR

Standard Planning Report

02 October, 2018

Project: WELD-NAD83-UTMFT13N
Site: 3N-66W-28 BARCLAY FARMS 37-28HZ PAD
Well: BARCLAY FARMS 28-7HZ
Wellbore: Plan A
Design: Permit Rev-1

US ROCKIES WATTENBERG PLANNING

CASING DETAILS

TVD	MD	Size
1500.00	1522.07	9-5/8
7142.00	7713.39	5-1/2

WELL DETAILS: BARCLAY FARMS 28-7HZ

GL = 4945.00

RKB = 17' @ 4962.00usft (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	270.00	0.00	0.00	270.00	0.00	0.00	0.00	0.00	0.00	
3	1446.67	17.65	29.80	1428.14	156.03	89.36	1.50	29.80	-156.28	
4	4176.67	17.65	29.80	4029.63	874.32	500.73	0.00	0.00	-875.71	
5	5059.17	0.00	0.00	4898.24	991.34	567.75	2.00	180.00	-992.92	
6	6586.73	0.00	0.00	6425.81	991.34	567.75	0.00	0.00	-992.92	
7	7713.39	90.13	180.16	7142.00	273.49	565.80	8.00	180.16	-275.06	
8	12895.52	90.13	180.16	7130.00	-4908.62	551.75	0.00	0.00	4907.06	BARCLAY FARMS 28-7HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
BARCLAY FARMS 28-7HZ_SHL	0.00	0.00	0.00	40.202396	-104.776056
BARCLAY FARMS 28-7HZ_BHL	7130.00	-4908.62	551.75	40.188916	-104.774080

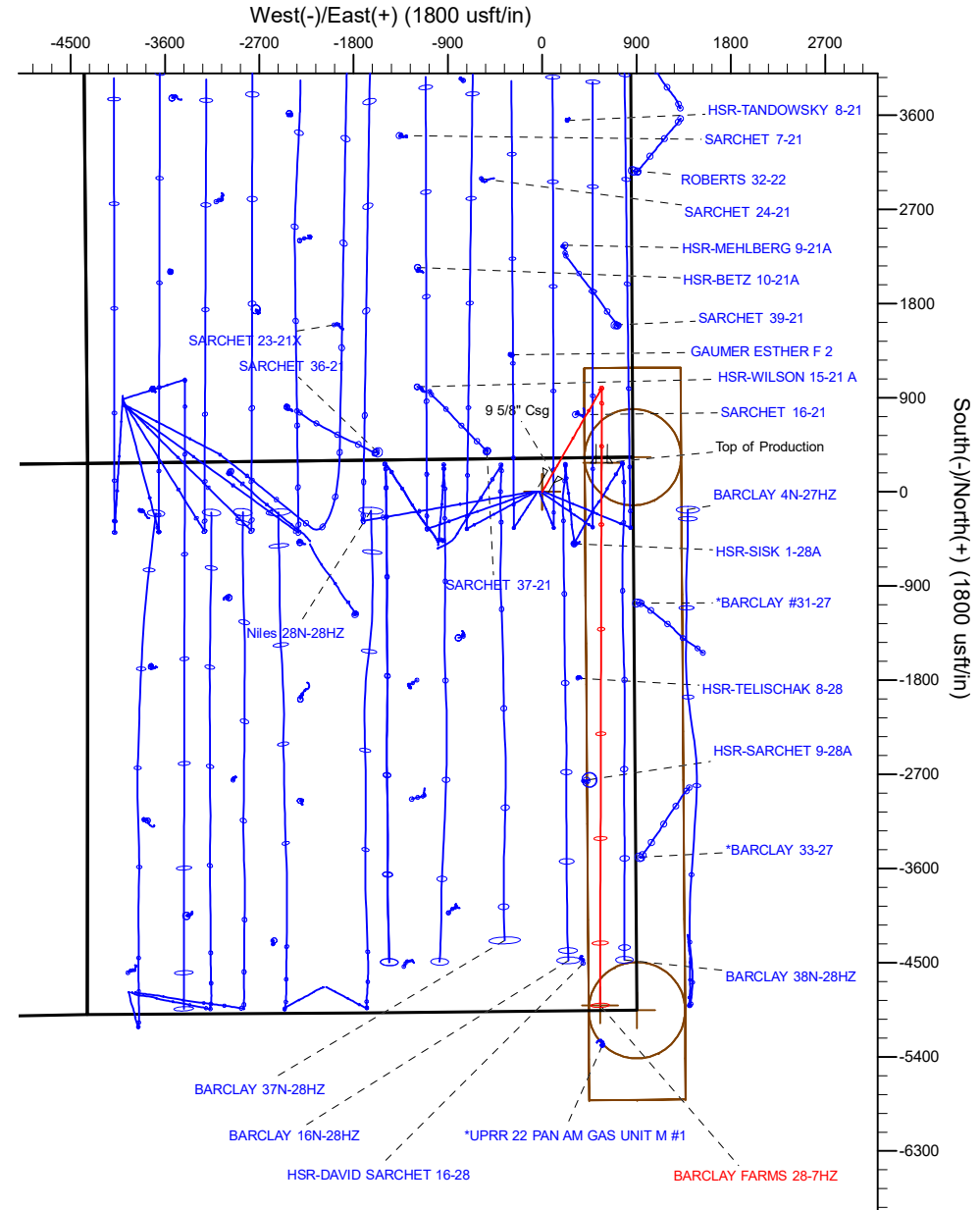
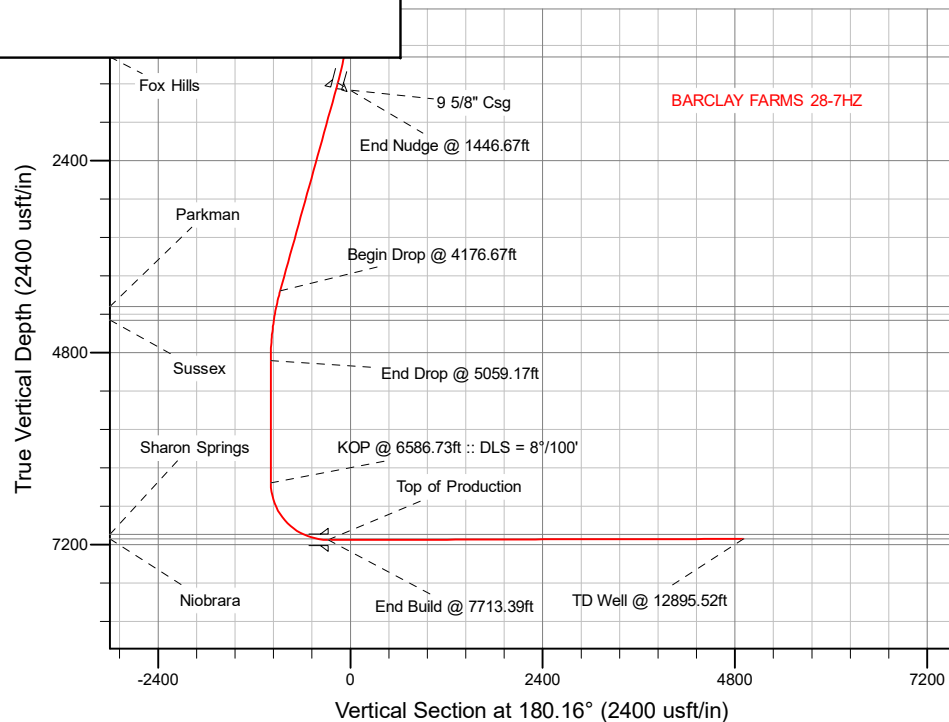
FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1104.00	1110.77	Fox Hills
4224.00	4378.54	Parkman
4393.00	4551.27	Sussex
7074.00	7397.10	Sharon Springs
7127.00	7564.88	Niobrara

SHL
321' FNL
867' FEL

HEEL
50' FNL
299' FEL

TOE
50' FSL
351' FEL



Plan: Permit Rev-1 (BARCLAY FARMS 28-7HZ/Plan A)

Date: 10/02/2018

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BARCLAY FARMS 28-7HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4962.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4962.00usft (Drilling Rig)
Site:	3N-66W-28 BARCLAY FARMS 37-28HZ PAD	North Reference:	True
Well:	BARCLAY FARMS 28-7HZ	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		3N-66W-28 BARCLAY FARMS 37-28HZ PAD			
Site Position:		Northing:	14,600,514.71 usft	Latitude:	40.202398
From:	Lat/Long	Easting:	1,702,856.67 usft	Longitude:	-104.776379
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.14 °

Well	BARCLAY FARMS 28-7HZ					
Well Position	+N/-S	-0.73 usft	Northing:	14,600,514.20 usft	Latitude:	40.202396
	+E/-W	90.19 usft	Easting:	1,702,946.86 usft	Longitude:	-104.776056
Position Uncertainty		3.28 usft	Wellhead Elevation:		Ground Level:	4,945.00 usft

Wellbore	Plan A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2015	9/25/2018	8.07	66.66	52,142.26175055

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	180.16

Plan Survey Tool Program		Date	10/2/2018		
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+II Fixed:v2:crustal field declinatio	
2	1,500.00	12,895.52	Permit Rev-1 (Plan A)	APC_ISCWSA REV 2 MWD+II Fixed:v2:crustal field declinatio	

Corporate
Planning Report

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Site:	3N-66W-28 BARCLAY FARMS 37-28HZ PAD	North Reference:	True
Well:	BARCLAY FARMS 28-7HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
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	
270.00	0.00	0.00	270.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,446.67	17.65	29.80	1,428.14	156.03	89.36	1.50	1.50	0.00	29.80	
4,176.67	17.65	29.80	4,029.63	874.32	500.73	0.00	0.00	0.00	0.00	
5,059.17	0.00	0.00	4,898.24	991.34	567.75	2.00	-2.00	0.00	180.00	
6,586.73	0.00	0.00	6,425.81	991.34	567.75	0.00	0.00	0.00	0.00	
7,713.39	90.13	180.16	7,142.00	273.49	565.80	8.00	8.00	-15.96	180.16	
12,895.52	90.13	180.16	7,130.00	-4,908.62	551.75	0.00	0.00	0.00	0.00	BARCLAY FARMS 28

Corporate Planning Report

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Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4962.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4962.00usft (Drilling Rig)
Site:	3N-66W-28 BARCLAY FARMS 37-28HZ PAD	North Reference:	True
Well:	BARCLAY FARMS 28-7HZ	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
270.00	0.00	0.00	270.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 270.00ft									
300.00	0.45	29.80	300.00	0.10	0.06	-0.10	1.50	1.50	0.00
400.00	1.95	29.80	399.97	1.92	1.10	-1.92	1.50	1.50	0.00
500.00	3.45	29.80	499.86	6.01	3.44	-6.02	1.50	1.50	0.00
600.00	4.95	29.80	599.59	12.36	7.08	-12.38	1.50	1.50	0.00
700.00	6.45	29.80	699.09	20.98	12.02	-21.01	1.50	1.50	0.00
800.00	7.95	29.80	798.30	31.86	18.24	-31.91	1.50	1.50	0.00
900.00	9.45	29.80	897.15	44.98	25.76	-45.05	1.50	1.50	0.00
1,000.00	10.95	29.80	995.56	60.35	34.56	-60.44	1.50	1.50	0.00
1,100.00	12.45	29.80	1,093.48	77.94	44.64	-78.07	1.50	1.50	0.00
1,110.77	12.61	29.80	1,104.00	79.97	45.80	-80.10	1.50	1.50	0.00
Fox Hills									
1,200.00	13.95	29.80	1,190.84	97.76	55.99	-97.92	1.50	1.50	0.00
1,300.00	15.45	29.80	1,287.56	119.78	68.60	-119.97	1.50	1.50	0.00
1,400.00	16.95	29.80	1,383.59	143.99	82.46	-144.22	1.50	1.50	0.00
1,446.67	17.65	29.80	1,428.14	156.03	89.36	-156.28	1.50	1.50	0.00
End Nudge @ 1446.67ft									
1,500.00	17.65	29.80	1,478.97	170.06	97.40	-170.33	0.00	0.00	0.00
1,522.07	17.65	29.80	1,500.00	175.87	100.72	-176.15	0.00	0.00	0.00
9 5/8" Csg									
1,600.00	17.65	29.80	1,574.26	196.37	112.46	-196.69	0.00	0.00	0.00
1,700.00	17.65	29.80	1,669.55	222.68	127.53	-223.04	0.00	0.00	0.00
1,800.00	17.65	29.80	1,764.85	249.00	142.60	-249.39	0.00	0.00	0.00
1,900.00	17.65	29.80	1,860.14	275.31	157.67	-275.75	0.00	0.00	0.00
2,000.00	17.65	29.80	1,955.43	301.62	172.74	-302.10	0.00	0.00	0.00
2,100.00	17.65	29.80	2,050.72	327.93	187.81	-328.45	0.00	0.00	0.00
2,200.00	17.65	29.80	2,146.02	354.24	202.87	-354.80	0.00	0.00	0.00
2,300.00	17.65	29.80	2,241.31	380.55	217.94	-381.16	0.00	0.00	0.00
2,400.00	17.65	29.80	2,336.60	406.86	233.01	-407.51	0.00	0.00	0.00
2,500.00	17.65	29.80	2,431.89	433.17	248.08	-433.86	0.00	0.00	0.00
2,600.00	17.65	29.80	2,527.19	459.48	263.15	-460.22	0.00	0.00	0.00
2,700.00	17.65	29.80	2,622.48	485.79	278.22	-486.57	0.00	0.00	0.00
2,800.00	17.65	29.80	2,717.77	512.10	293.28	-512.92	0.00	0.00	0.00
2,900.00	17.65	29.80	2,813.06	538.41	308.35	-539.27	0.00	0.00	0.00
3,000.00	17.65	29.80	2,908.36	564.73	323.42	-565.63	0.00	0.00	0.00
3,100.00	17.65	29.80	3,003.65	591.04	338.49	-591.98	0.00	0.00	0.00
3,200.00	17.65	29.80	3,098.94	617.35	353.56	-618.33	0.00	0.00	0.00
3,300.00	17.65	29.80	3,194.24	643.66	368.63	-644.68	0.00	0.00	0.00
3,400.00	17.65	29.80	3,289.53	669.97	383.69	-671.04	0.00	0.00	0.00
3,500.00	17.65	29.80	3,384.82	696.28	398.76	-697.39	0.00	0.00	0.00
3,600.00	17.65	29.80	3,480.11	722.59	413.83	-723.74	0.00	0.00	0.00
3,700.00	17.65	29.80	3,575.41	748.90	428.90	-750.10	0.00	0.00	0.00
3,800.00	17.65	29.80	3,670.70	775.21	443.97	-776.45	0.00	0.00	0.00
3,900.00	17.65	29.80	3,765.99	801.52	459.04	-802.80	0.00	0.00	0.00
4,000.00	17.65	29.80	3,861.28	827.83	474.10	-829.15	0.00	0.00	0.00
4,100.00	17.65	29.80	3,956.58	854.14	489.17	-855.51	0.00	0.00	0.00
4,176.67	17.65	29.80	4,029.63	874.32	500.73	-875.71	0.00	0.00	0.00
Begin Drop @ 4176.67ft									
4,200.00	17.18	29.80	4,051.90	880.38	504.20	-881.78	2.00	-2.00	0.00
4,300.00	15.18	29.80	4,147.93	904.56	518.05	-906.00	2.00	-2.00	0.00

Corporate Planning Report

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Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4962.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4962.00usft (Drilling Rig)
Site:	3N-66W-28 BARCLAY FARMS 37-28HZ PAD	North Reference:	True
Well:	BARCLAY FARMS 28-7HZ	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)
4,378.54	13.61	29.80	4,224.00	921.51	527.75	-922.98	2.00	-2.00	0.00
Parkman									
4,400.00	13.18	29.80	4,244.88	925.82	530.22	-927.30	2.00	-2.00	0.00
4,500.00	11.18	29.80	4,342.62	944.13	540.71	-945.64	2.00	-2.00	0.00
4,551.27	10.16	29.80	4,393.00	952.37	545.43	-953.89	2.00	-2.00	0.00
Sussex									
4,600.00	9.18	29.80	4,441.04	959.48	549.50	-961.01	2.00	-2.00	0.00
4,700.00	7.18	29.80	4,540.02	971.83	556.57	-973.38	2.00	-2.00	0.00
4,800.00	5.18	29.80	4,639.43	981.17	561.92	-982.74	2.00	-2.00	0.00
4,900.00	3.18	29.80	4,739.16	987.50	565.55	-989.08	2.00	-2.00	0.00
5,000.00	1.18	29.80	4,839.08	990.81	567.44	-992.39	2.00	-2.00	0.00
5,059.17	0.00	0.00	4,898.24	991.34	567.75	-992.92	2.00	-2.00	0.00
End Drop @ 5059.17ft									
5,100.00	0.00	0.00	4,939.08	991.34	567.75	-992.92	0.00	0.00	0.00
5,200.00	0.00	0.00	5,039.08	991.34	567.75	-992.92	0.00	0.00	0.00
5,300.00	0.00	0.00	5,139.08	991.34	567.75	-992.92	0.00	0.00	0.00
5,400.00	0.00	0.00	5,239.08	991.34	567.75	-992.92	0.00	0.00	0.00
5,500.00	0.00	0.00	5,339.08	991.34	567.75	-992.92	0.00	0.00	0.00
5,600.00	0.00	0.00	5,439.08	991.34	567.75	-992.92	0.00	0.00	0.00
5,700.00	0.00	0.00	5,539.08	991.34	567.75	-992.92	0.00	0.00	0.00
5,800.00	0.00	0.00	5,639.08	991.34	567.75	-992.92	0.00	0.00	0.00
5,900.00	0.00	0.00	5,739.08	991.34	567.75	-992.92	0.00	0.00	0.00
6,000.00	0.00	0.00	5,839.08	991.34	567.75	-992.92	0.00	0.00	0.00
6,100.00	0.00	0.00	5,939.08	991.34	567.75	-992.92	0.00	0.00	0.00
6,200.00	0.00	0.00	6,039.08	991.34	567.75	-992.92	0.00	0.00	0.00
6,300.00	0.00	0.00	6,139.08	991.34	567.75	-992.92	0.00	0.00	0.00
6,400.00	0.00	0.00	6,239.08	991.34	567.75	-992.92	0.00	0.00	0.00
6,500.00	0.00	0.00	6,339.08	991.34	567.75	-992.92	0.00	0.00	0.00
6,586.73	0.00	0.00	6,425.81	991.34	567.75	-992.92	0.00	0.00	0.00
KOP @ 6586.73ft :: DLS = 8°/100'									
6,600.00	1.06	180.16	6,439.08	991.22	567.74	-992.80	8.00	8.00	0.00
6,700.00	9.06	180.16	6,538.60	982.40	567.72	-983.98	8.00	8.00	0.00
6,800.00	17.06	180.16	6,635.94	959.82	567.66	-961.40	8.00	8.00	0.00
6,900.00	25.06	180.16	6,729.18	923.91	567.56	-925.49	8.00	8.00	0.00
7,000.00	33.06	180.16	6,816.52	875.38	567.43	-876.96	8.00	8.00	0.00
7,100.00	41.06	180.16	6,896.25	815.16	567.27	-816.74	8.00	8.00	0.00
7,200.00	49.06	180.16	6,966.83	744.43	567.08	-746.01	8.00	8.00	0.00
7,300.00	57.06	180.16	7,026.88	664.57	566.86	-666.15	8.00	8.00	0.00
7,397.10	64.83	180.16	7,074.00	579.75	566.63	-581.33	8.00	8.00	0.00
Sharon Springs									
7,400.00	65.06	180.16	7,075.23	577.12	566.62	-578.70	8.00	8.00	0.00
7,500.00	73.06	180.16	7,110.93	483.80	566.37	-485.38	8.00	8.00	0.00
7,564.88	78.25	180.16	7,127.00	420.97	566.20	-422.55	8.00	8.00	0.00
Niobrara									
7,600.00	81.06	180.16	7,133.31	386.42	566.11	-388.00	8.00	8.00	0.00
7,700.00	89.06	180.16	7,141.91	286.87	565.84	-288.45	8.00	8.00	0.00
7,713.39	90.13	180.16	7,142.00	273.48	565.80	-275.06	8.00	8.00	0.00
End Build @ 7713.39ft - Top of Production									
7,800.00	90.13	180.16	7,141.80	186.87	565.56	-188.45	0.00	0.00	0.00
7,900.00	90.13	180.16	7,141.57	86.88	565.29	-88.45	0.00	0.00	0.00
8,000.00	90.13	180.16	7,141.34	-13.12	565.02	11.55	0.00	0.00	0.00
8,100.00	90.13	180.16	7,141.11	-113.12	564.75	111.55	0.00	0.00	0.00
8,200.00	90.13	180.16	7,140.87	-213.12	564.48	211.55	0.00	0.00	0.00

Planning Report

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Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4962.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4962.00usft (Drilling Rig)
Site:	3N-66W-28 BARCLAY FARMS 37-28HZ PAD	North Reference:	True
Well:	BARCLAY FARMS 28-7HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-1		

Planned Survey

Measured			Vertical			Vertical	Dogleg	Build	Turn
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
8,300.00	90.13	180.16	7,140.64	-313.12	564.21	311.55	0.00	0.00	0.00
8,400.00	90.13	180.16	7,140.41	-413.12	563.94	411.55	0.00	0.00	0.00
8,500.00	90.13	180.16	7,140.18	-513.12	563.67	511.54	0.00	0.00	0.00
8,600.00	90.13	180.16	7,139.95	-613.12	563.40	611.54	0.00	0.00	0.00
8,700.00	90.13	180.16	7,139.72	-713.12	563.12	711.54	0.00	0.00	0.00
8,800.00	90.13	180.16	7,139.48	-813.12	562.85	811.54	0.00	0.00	0.00
8,900.00	90.13	180.16	7,139.25	-913.12	562.58	911.54	0.00	0.00	0.00
9,000.00	90.13	180.16	7,139.02	-1,013.12	562.31	1,011.54	0.00	0.00	0.00
9,100.00	90.13	180.16	7,138.79	-1,113.12	562.04	1,111.54	0.00	0.00	0.00
9,200.00	90.13	180.16	7,138.56	-1,213.12	561.77	1,211.54	0.00	0.00	0.00
9,300.00	90.13	180.16	7,138.33	-1,313.12	561.50	1,311.54	0.00	0.00	0.00
9,400.00	90.13	180.16	7,138.10	-1,413.12	561.23	1,411.54	0.00	0.00	0.00
9,500.00	90.13	180.16	7,137.86	-1,513.11	560.96	1,511.54	0.00	0.00	0.00
9,600.00	90.13	180.16	7,137.63	-1,613.11	560.68	1,611.54	0.00	0.00	0.00
9,700.00	90.13	180.16	7,137.40	-1,713.11	560.41	1,711.54	0.00	0.00	0.00
9,800.00	90.13	180.16	7,137.17	-1,813.11	560.14	1,811.54	0.00	0.00	0.00
9,900.00	90.13	180.16	7,136.94	-1,913.11	559.87	1,911.54	0.00	0.00	0.00
10,000.00	90.13	180.16	7,136.71	-2,013.11	559.60	2,011.54	0.00	0.00	0.00
10,100.00	90.13	180.16	7,136.47	-2,113.11	559.33	2,111.54	0.00	0.00	0.00
10,200.00	90.13	180.16	7,136.24	-2,213.11	559.06	2,211.54	0.00	0.00	0.00
10,300.00	90.13	180.16	7,136.01	-2,313.11	558.79	2,311.54	0.00	0.00	0.00
10,400.00	90.13	180.16	7,135.78	-2,413.11	558.52	2,411.54	0.00	0.00	0.00
10,500.00	90.13	180.16	7,135.55	-2,513.11	558.24	2,511.54	0.00	0.00	0.00
10,600.00	90.13	180.16	7,135.32	-2,613.11	557.97	2,611.54	0.00	0.00	0.00
10,700.00	90.13	180.16	7,135.08	-2,713.11	557.70	2,711.54	0.00	0.00	0.00
10,800.00	90.13	180.16	7,134.85	-2,813.11	557.43	2,811.54	0.00	0.00	0.00
10,900.00	90.13	180.16	7,134.62	-2,913.11	557.16	2,911.54	0.00	0.00	0.00
11,000.00	90.13	180.16	7,134.39	-3,013.11	556.89	3,011.54	0.00	0.00	0.00
11,100.00	90.13	180.16	7,134.16	-3,113.10	556.62	3,111.54	0.00	0.00	0.00
11,200.00	90.13	180.16	7,133.93	-3,213.10	556.35	3,211.54	0.00	0.00	0.00
11,300.00	90.13	180.16	7,133.70	-3,313.10	556.08	3,311.54	0.00	0.00	0.00
11,400.00	90.13	180.16	7,133.46	-3,413.10	555.80	3,411.54	0.00	0.00	0.00
11,500.00	90.13	180.16	7,133.23	-3,513.10	555.53	3,511.54	0.00	0.00	0.00
11,600.00	90.13	180.16	7,133.00	-3,613.10	555.26	3,611.54	0.00	0.00	0.00
11,700.00	90.13	180.16	7,132.77	-3,713.10	554.99	3,711.54	0.00	0.00	0.00
11,800.00	90.13	180.16	7,132.54	-3,813.10	554.72	3,811.54	0.00	0.00	0.00
11,900.00	90.13	180.16	7,132.31	-3,913.10	554.45	3,911.54	0.00	0.00	0.00
12,000.00	90.13	180.16	7,132.07	-4,013.10	554.18	4,011.54	0.00	0.00	0.00
12,100.00	90.13	180.16	7,131.84	-4,113.10	553.91	4,111.54	0.00	0.00	0.00
12,200.00	90.13	180.16	7,131.61	-4,213.10	553.64	4,211.54	0.00	0.00	0.00
12,300.00	90.13	180.16	7,131.38	-4,313.10	553.36	4,311.53	0.00	0.00	0.00
12,400.00	90.13	180.16	7,131.15	-4,413.10	553.09	4,411.53	0.00	0.00	0.00
12,500.00	90.13	180.16	7,130.92	-4,513.10	552.82	4,511.53	0.00	0.00	0.00
12,600.00	90.13	180.16	7,130.68	-4,613.09	552.55	4,611.53	0.00	0.00	0.00
12,700.00	90.13	180.16	7,130.45	-4,713.09	552.28	4,711.53	0.00	0.00	0.00
12,800.00	90.13	180.16	7,130.22	-4,813.09	552.01	4,811.53	0.00	0.00	0.00
12,895.52	90.13	180.16	7,130.00	-4,908.62	551.75	4,907.06	0.00	0.00	0.00

TD Well @ 12895.52ft

Corporate Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BARCLAY FARMS 28-7HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4962.00usft (Drilling Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4962.00usft (Drilling Rig)
Site:	3N-66W-28 BARCLAY FARMS 37-28HZ PAD	North Reference:	True
Well:	BARCLAY FARMS 28-7HZ	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 (")	
1,522.07	1,500.00	9 5/8" Csg	9-5/8	13-1/2	
7,713.39	7,142.00	Top of Production	5-1/2	7-7/8	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,110.77	1,104.00	Fox Hills				
4,378.54	4,224.00	Parkman				
4,551.27	4,393.00	Sussex				
7,397.10	7,074.00	Sharon Springs				
7,564.88	7,127.00	Niobrara				

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates			
		+N/-S (usft)	+E/-W (usft)	Comment	
270.00	270.00	0.00	0.00	Begin Nudge @ 270.00ft	
1,446.67	1,428.14	156.03	89.36	End Nudge @ 1446.67ft	
4,176.67	4,029.63	874.32	500.73	Begin Drop @ 4176.67ft	
5,059.17	4,898.24	991.34	567.75	End Drop @ 5059.17ft	
6,586.73	6,425.81	991.34	567.75	KOP @ 6586.73ft :: DLS = 8°/100'	
7,713.39	7,142.00	273.49	565.80	End Build @ 7713.39ft	
12,895.52	7,130.00	-4,908.62	551.75	TD Well @ 12895.52ft	