

US ROCKIES WATTENBERG PLANNING

WELD-NAD83-UTMFT13N

1N-66W-17 Burough 20-17HZ Pad

BUROUGH 17N-17HZ

Plan A

Plan: Permit Rev-2

Standard Planning Report

05 April, 2016



Azimuths to True North
Magnetic North: 8.28°

Magnetic Field
Strength: 52494.2snT
Dip Angle: 66.61°
Date: 9/12/2015
Model: IGRF2010

SITE: 1N-66W-17 Burough 20-17HZ Pad

Well: BUROUGH 17N-17HZ
Wellbore: Plan A
Design: Permit Rev-2

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1402.00	1410.60	Fox Hills
4582.00	4740.49	Sussex
7168.00	7385.05	Sharon Springs
7189.00	7416.89	Niobrara Top
7334.00	7800.65	Niobrara B Bench

WELL DETAILS: BUROUGH 17N-17HZ

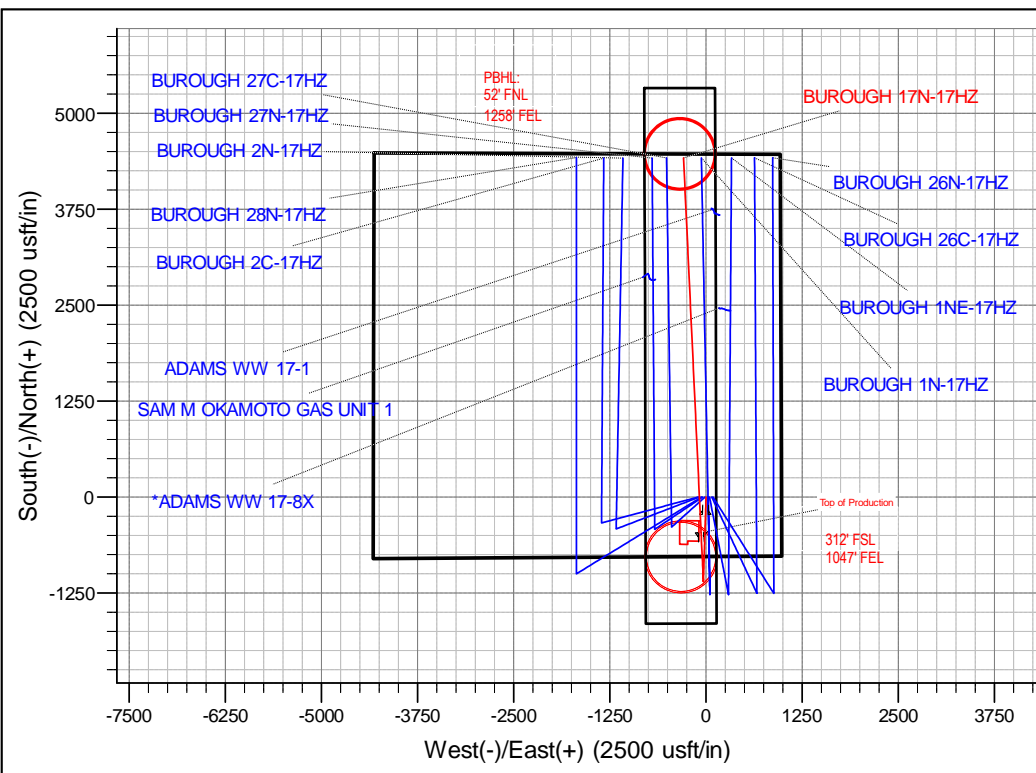
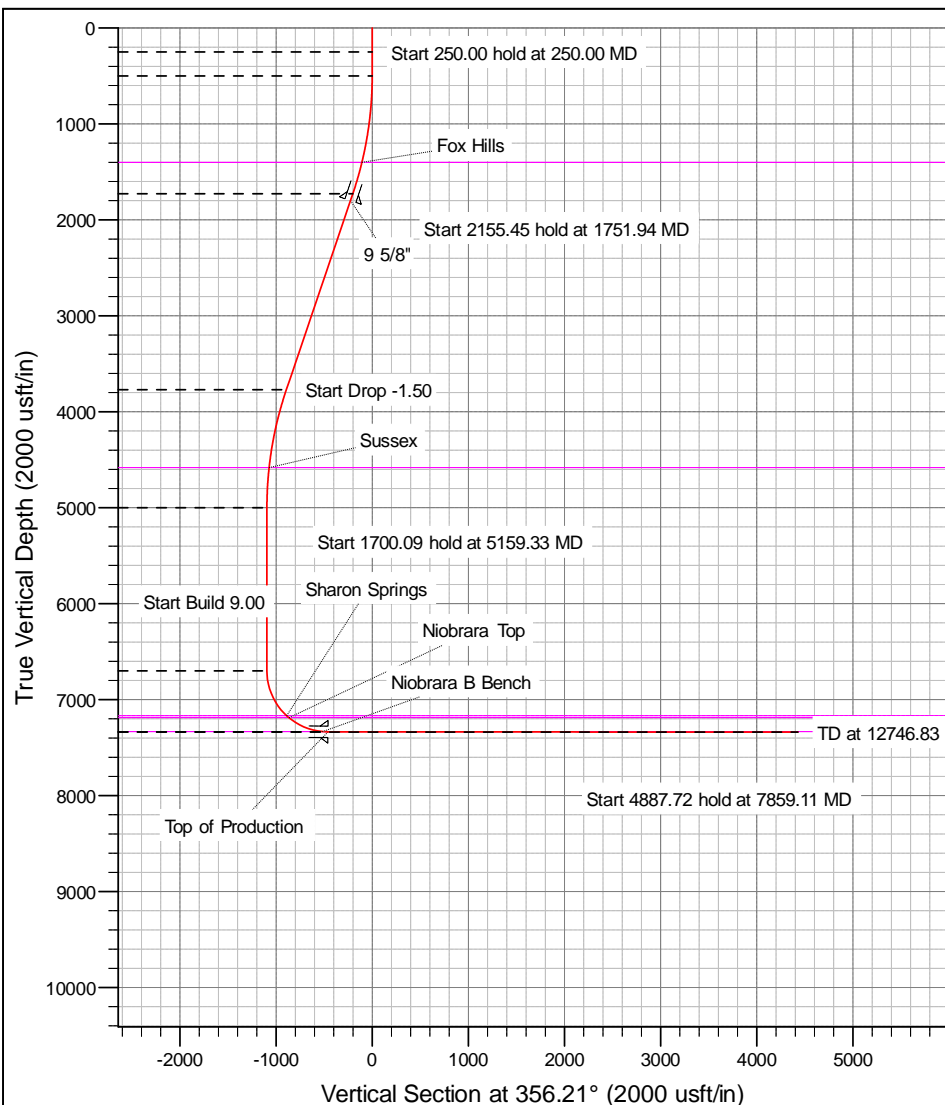
+N/-S	+E/-W	GL: 4981.00 Northing	RKB = 17' @ 4998.00usft (D Rig) Easting	Latitude 40.046171	Longitude -104.795030	Slot
0.00	0.00	14543612.29	1697780.05			

SECTION DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	VSECT
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
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00
1751.94	18.78	181.82	1729.65	-203.23	-6.47	1.50	202.36
3907.39	18.78	181.82	3770.35	-896.77	-28.53	0.00	892.91
5159.33	0.00	0.00	5000.00	-1100.00	-35.00	1.50	095.27
6859.42	0.00	0.00	6700.09	-1100.00	-35.00	0.00	095.27
7859.11	89.97	357.32	7336.71	-464.39	-64.72	9.00	459.09
12746.83	89.97	357.32	7339.10	4418.00	-292.98	0.00	427.70

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Borough 17N-17HZ PBHL Plan B	7339.10	4418.00	-292.98	14548029.60	1697476.90	40.058304	-104.796077	Point



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Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BURGHOUGH 17N-17HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4998.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4998.00usft (D Rig)
Site:	1N-66W-17 Burough 20-17HZ Pad	North Reference:	True
Well:	BURGHOUGH 17N-17HZ	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-17 Burough 20-17HZ Pad			
Site Position:		Northing:	14,543,611.68 usft	Latitude:	40.046170
From:	Lat/Long	Easting:	1,697,675.10 usft	Longitude:	-104.795405
Position Uncertainty:	0.00 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.13 °

Well	BUROUGH 17N-17HZ					
Well Position	+N/-S	0.36 usft	Northing:	14,543,612.28 usft	Latitude:	40.046171
	+E/-W	104.95 usft	Easting:	1,697,780.05 usft	Longitude:	-104.795030
Position Uncertainty		3.28 usft	Wellhead Elevation:	0.00 usft	Ground Level:	4,981.00 usft

Wellbore	Plan A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	9/12/2015	8.28	66.61	52,494

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	356.21

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	
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,751.94	18.78	181.82	1,729.65	-203.23	-6.47	1.50	1.50	0.00	181.82	
3,907.39	18.78	181.82	3,770.35	-896.77	-28.53	0.00	0.00	0.00	0.00	
5,159.33	0.00	0.00	5,000.00	-1,100.00	-35.00	1.50	-1.50	0.00	180.00	
6,859.42	0.00	0.00	6,700.09	-1,100.00	-35.00	0.00	0.00	0.00	0.00	
7,859.11	89.97	357.32	7,336.71	-464.39	-64.72	9.00	9.00	0.00	357.32	
12,746.83	89.97	357.32	7,339.10	4,418.00	-292.98	0.00	0.00	0.00	0.00	Borough 17N-17HZ P

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Planning Report

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Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4998.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4998.00usft (D Rig)
Site:	1N-66W-17 Burough 20-17HZ Pad	North Reference:	True
Well:	BUROUGH 17N-17HZ	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
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
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	1.50	181.82	599.99	-1.31	-0.04	-1.30	1.50	1.50	0.00
700.00	3.00	181.82	699.91	-5.23	-0.17	-5.21	1.50	1.50	0.00
800.00	4.50	181.82	799.69	-11.77	-0.37	-11.72	1.50	1.50	0.00
900.00	6.00	181.82	899.27	-20.91	-0.67	-20.82	1.50	1.50	0.00
1,000.00	7.50	181.82	998.57	-32.66	-1.04	-32.52	1.50	1.50	0.00
1,100.00	9.00	181.82	1,097.54	-47.00	-1.50	-46.80	1.50	1.50	0.00
1,200.00	10.50	181.82	1,196.09	-63.93	-2.03	-63.65	1.50	1.50	0.00
1,300.00	12.00	181.82	1,294.16	-83.43	-2.65	-83.07	1.50	1.50	0.00
1,400.00	13.50	181.82	1,391.70	-105.49	-3.36	-105.03	1.50	1.50	0.00
1,410.60	13.66	181.82	1,402.00	-107.97	-3.44	-107.51	1.50	1.50	0.00
Fox Hills									
1,500.00	15.00	181.82	1,488.62	-130.09	-4.14	-129.53	1.50	1.50	0.00
1,600.00	16.50	181.82	1,584.86	-157.22	-5.00	-156.54	1.50	1.50	0.00
1,700.00	18.00	181.82	1,680.36	-186.86	-5.95	-186.05	1.50	1.50	0.00
1,751.94	18.78	181.82	1,729.65	-203.23	-6.47	-202.36	1.50	1.50	0.00
1,800.00	18.78	181.82	1,775.15	-218.70	-6.96	-217.76	0.00	0.00	0.00
1,826.25	18.78	181.82	1,800.00	-227.14	-7.23	-226.17	0.00	0.00	0.00
9 5/8"									
1,900.00	18.78	181.82	1,869.82	-250.87	-7.98	-249.79	0.00	0.00	0.00
2,000.00	18.78	181.82	1,964.50	-283.05	-9.01	-281.83	0.00	0.00	0.00
2,100.00	18.78	181.82	2,059.18	-315.22	-10.03	-313.87	0.00	0.00	0.00
2,200.00	18.78	181.82	2,153.85	-347.40	-11.05	-345.91	0.00	0.00	0.00
2,300.00	18.78	181.82	2,248.53	-379.58	-12.08	-377.94	0.00	0.00	0.00
2,400.00	18.78	181.82	2,343.21	-411.75	-13.10	-409.98	0.00	0.00	0.00
2,500.00	18.78	181.82	2,437.88	-443.93	-14.12	-442.02	0.00	0.00	0.00
2,600.00	18.78	181.82	2,532.56	-476.10	-15.15	-474.06	0.00	0.00	0.00
2,700.00	18.78	181.82	2,627.24	-508.28	-16.17	-506.09	0.00	0.00	0.00
2,800.00	18.78	181.82	2,721.91	-540.45	-17.20	-538.13	0.00	0.00	0.00
2,900.00	18.78	181.82	2,816.59	-572.63	-18.22	-570.17	0.00	0.00	0.00
3,000.00	18.78	181.82	2,911.27	-604.81	-19.24	-602.21	0.00	0.00	0.00
3,100.00	18.78	181.82	3,005.94	-636.98	-20.27	-634.25	0.00	0.00	0.00
3,200.00	18.78	181.82	3,100.62	-669.16	-21.29	-666.28	0.00	0.00	0.00
3,300.00	18.78	181.82	3,195.30	-701.33	-22.32	-698.32	0.00	0.00	0.00
3,400.00	18.78	181.82	3,289.97	-733.51	-23.34	-730.36	0.00	0.00	0.00
3,500.00	18.78	181.82	3,384.65	-765.69	-24.36	-762.40	0.00	0.00	0.00
3,600.00	18.78	181.82	3,479.33	-797.86	-25.39	-794.43	0.00	0.00	0.00
3,700.00	18.78	181.82	3,574.00	-830.04	-26.41	-826.47	0.00	0.00	0.00
3,800.00	18.78	181.82	3,668.68	-862.21	-27.43	-858.51	0.00	0.00	0.00
3,900.00	18.78	181.82	3,763.36	-894.39	-28.46	-890.55	0.00	0.00	0.00
3,907.39	18.78	181.82	3,770.35	-896.77	-28.53	-892.91	0.00	0.00	0.00
4,000.00	17.39	181.82	3,858.39	-925.50	-29.45	-921.52	1.50	-1.50	0.00
4,100.00	15.89	181.82	3,954.20	-954.12	-30.36	-950.02	1.50	-1.50	0.00
4,200.00	14.39	181.82	4,050.72	-980.22	-31.19	-976.01	1.50	-1.50	0.00
4,300.00	12.89	181.82	4,147.90	-1,003.79	-31.94	-999.48	1.50	-1.50	0.00
4,400.00	11.39	181.82	4,245.66	-1,024.81	-32.61	-1,020.41	1.50	-1.50	0.00
4,500.00	9.89	181.82	4,343.94	-1,043.27	-33.19	-1,038.78	1.50	-1.50	0.00
4,600.00	8.39	181.82	4,442.67	-1,059.14	-33.70	-1,054.59	1.50	-1.50	0.00

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Planning Report

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Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4998.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4998.00usft (D Rig)
Site:	1N-66W-17 Burough 20-17HZ Pad	North Reference:	True
Well:	BUROUGH 17N-17HZ	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)
4,700.00	6.89	181.82	4,541.77	-1,072.43	-34.12	-1,067.82	1.50	-1.50	0.00
4,740.49	6.28	181.82	4,582.00	-1,077.07	-34.27	-1,072.44	1.50	-1.50	0.00
Sussex									
4,800.00	5.39	181.82	4,641.20	-1,083.12	-34.46	-1,078.47	1.50	-1.50	0.00
4,900.00	3.89	181.82	4,740.87	-1,091.20	-34.72	-1,086.52	1.50	-1.50	0.00
5,000.00	2.39	181.82	4,840.71	-1,096.68	-34.89	-1,091.97	1.50	-1.50	0.00
5,100.00	0.89	181.82	4,940.67	-1,099.54	-34.99	-1,094.81	1.50	-1.50	0.00
5,159.33	0.00	0.00	5,000.00	-1,100.00	-35.00	-1,095.27	1.50	-1.50	0.00
5,200.00	0.00	0.00	5,040.67	-1,100.00	-35.00	-1,095.27	0.00	0.00	0.00
5,300.00	0.00	0.00	5,140.67	-1,100.00	-35.00	-1,095.27	0.00	0.00	0.00
5,400.00	0.00	0.00	5,240.67	-1,100.00	-35.00	-1,095.27	0.00	0.00	0.00
5,500.00	0.00	0.00	5,340.67	-1,100.00	-35.00	-1,095.27	0.00	0.00	0.00
5,600.00	0.00	0.00	5,440.67	-1,100.00	-35.00	-1,095.27	0.00	0.00	0.00
5,700.00	0.00	0.00	5,540.67	-1,100.00	-35.00	-1,095.27	0.00	0.00	0.00
5,800.00	0.00	0.00	5,640.67	-1,100.00	-35.00	-1,095.27	0.00	0.00	0.00
5,900.00	0.00	0.00	5,740.67	-1,100.00	-35.00	-1,095.27	0.00	0.00	0.00
6,000.00	0.00	0.00	5,840.67	-1,100.00	-35.00	-1,095.27	0.00	0.00	0.00
6,100.00	0.00	0.00	5,940.67	-1,100.00	-35.00	-1,095.27	0.00	0.00	0.00
6,200.00	0.00	0.00	6,040.67	-1,100.00	-35.00	-1,095.27	0.00	0.00	0.00
6,300.00	0.00	0.00	6,140.67	-1,100.00	-35.00	-1,095.27	0.00	0.00	0.00
6,400.00	0.00	0.00	6,240.67	-1,100.00	-35.00	-1,095.27	0.00	0.00	0.00
6,500.00	0.00	0.00	6,340.67	-1,100.00	-35.00	-1,095.27	0.00	0.00	0.00
6,600.00	0.00	0.00	6,440.67	-1,100.00	-35.00	-1,095.27	0.00	0.00	0.00
6,700.00	0.00	0.00	6,540.67	-1,100.00	-35.00	-1,095.27	0.00	0.00	0.00
6,800.00	0.00	0.00	6,640.67	-1,100.00	-35.00	-1,095.27	0.00	0.00	0.00
6,859.42	0.00	0.00	6,700.09	-1,100.00	-35.00	-1,095.27	0.00	0.00	0.00
6,900.00	3.65	357.32	6,740.64	-1,098.71	-35.06	-1,093.98	9.00	9.00	0.00
7,000.00	12.65	357.32	6,839.53	-1,084.56	-35.72	-1,079.82	9.00	9.00	0.00
7,100.00	21.65	357.32	6,934.98	-1,055.13	-37.10	-1,050.36	9.00	9.00	0.00
7,200.00	30.65	357.32	7,024.65	-1,011.15	-39.15	-1,006.34	9.00	9.00	0.00
7,300.00	39.65	357.32	7,106.33	-953.70	-41.84	-948.84	9.00	9.00	0.00
7,385.05	47.31	357.32	7,168.00	-895.28	-44.57	-890.37	9.00	9.00	0.00
Sharon Springs									
7,400.00	48.65	357.32	7,178.01	-884.19	-45.09	-879.27	9.00	9.00	0.00
7,416.89	50.17	357.32	7,189.00	-871.37	-45.69	-866.44	9.00	9.00	0.00
Niobrara Top									
7,500.00	57.65	357.32	7,237.92	-804.33	-48.82	-799.34	9.00	9.00	0.00
7,600.00	66.65	357.32	7,284.58	-716.10	-52.95	-711.03	9.00	9.00	0.00
7,700.00	75.65	357.32	7,316.85	-621.66	-57.36	-616.51	9.00	9.00	0.00
7,800.00	84.65	357.32	7,333.94	-523.35	-61.96	-518.10	9.00	9.00	0.00
7,800.65	84.71	357.32	7,334.00	-522.71	-61.99	-517.46	9.00	9.00	0.00
Niobrara B Bench									
7,859.11	89.97	357.32	7,336.71	-464.39	-64.72	-459.09	9.00	9.00	0.00
Top of Production									
7,900.00	89.97	357.32	7,336.73	-423.54	-66.63	-418.21	0.00	0.00	0.00
8,000.00	89.97	357.32	7,336.78	-323.65	-71.30	-318.22	0.00	0.00	0.00
8,100.00	89.97	357.32	7,336.83	-223.76	-75.97	-218.24	0.00	0.00	0.00
8,200.00	89.97	357.32	7,336.88	-123.87	-80.64	-118.26	0.00	0.00	0.00
8,300.00	89.97	357.32	7,336.93	-23.98	-85.31	-18.28	0.00	0.00	0.00
8,400.00	89.97	357.32	7,336.98	75.91	-89.98	81.70	0.00	0.00	0.00
8,500.00	89.97	357.32	7,337.02	175.80	-94.65	181.68	0.00	0.00	0.00
8,600.00	89.97	357.32	7,337.07	275.69	-99.32	281.66	0.00	0.00	0.00
8,700.00	89.97	357.32	7,337.12	375.58	-103.99	381.64	0.00	0.00	0.00

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BUROUGH 17N-17HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4998.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4998.00usft (D Rig)
Site:	1N-66W-17 Burough 20-17HZ Pad	North Reference:	True
Well:	BUROUGH 17N-17HZ	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)
8,800.00	89.97	357.32	7,337.17	475.48	-108.66	481.62	0.00	0.00	0.00
8,900.00	89.97	357.32	7,337.22	575.37	-113.33	581.60	0.00	0.00	0.00
9,000.00	89.97	357.32	7,337.27	675.26	-118.00	681.59	0.00	0.00	0.00
9,100.00	89.97	357.32	7,337.32	775.15	-122.67	781.57	0.00	0.00	0.00
9,200.00	89.97	357.32	7,337.37	875.04	-127.34	881.55	0.00	0.00	0.00
9,300.00	89.97	357.32	7,337.42	974.93	-132.01	981.53	0.00	0.00	0.00
9,400.00	89.97	357.32	7,337.46	1,074.82	-136.68	1,081.51	0.00	0.00	0.00
9,500.00	89.97	357.32	7,337.51	1,174.71	-141.35	1,181.49	0.00	0.00	0.00
9,600.00	89.97	357.32	7,337.56	1,274.60	-146.02	1,281.47	0.00	0.00	0.00
9,700.00	89.97	357.32	7,337.61	1,374.49	-150.69	1,381.45	0.00	0.00	0.00
9,800.00	89.97	357.32	7,337.66	1,474.38	-155.36	1,481.43	0.00	0.00	0.00
9,900.00	89.97	357.32	7,337.71	1,574.28	-160.03	1,581.41	0.00	0.00	0.00
10,000.00	89.97	357.32	7,337.76	1,674.17	-164.70	1,681.40	0.00	0.00	0.00
10,100.00	89.97	357.32	7,337.81	1,774.06	-169.37	1,781.38	0.00	0.00	0.00
10,200.00	89.97	357.32	7,337.86	1,873.95	-174.04	1,881.36	0.00	0.00	0.00
10,300.00	89.97	357.32	7,337.90	1,973.84	-178.71	1,981.34	0.00	0.00	0.00
10,400.00	89.97	357.32	7,337.95	2,073.73	-183.38	2,081.32	0.00	0.00	0.00
10,500.00	89.97	357.32	7,338.00	2,173.62	-188.05	2,181.30	0.00	0.00	0.00
10,600.00	89.97	357.32	7,338.05	2,273.51	-192.72	2,281.28	0.00	0.00	0.00
10,700.00	89.97	357.32	7,338.10	2,373.40	-197.39	2,381.26	0.00	0.00	0.00
10,800.00	89.97	357.32	7,338.15	2,473.29	-202.06	2,481.24	0.00	0.00	0.00
10,900.00	89.97	357.32	7,338.20	2,573.18	-206.73	2,581.22	0.00	0.00	0.00
11,000.00	89.97	357.32	7,338.25	2,673.07	-211.40	2,681.20	0.00	0.00	0.00
11,100.00	89.97	357.32	7,338.30	2,772.97	-216.07	2,781.19	0.00	0.00	0.00
11,200.00	89.97	357.32	7,338.34	2,872.86	-220.74	2,881.17	0.00	0.00	0.00
11,300.00	89.97	357.32	7,338.39	2,972.75	-225.41	2,981.15	0.00	0.00	0.00
11,400.00	89.97	357.32	7,338.44	3,072.64	-230.08	3,081.13	0.00	0.00	0.00
11,500.00	89.97	357.32	7,338.49	3,172.53	-234.75	3,181.11	0.00	0.00	0.00
11,600.00	89.97	357.32	7,338.54	3,272.42	-239.42	3,281.09	0.00	0.00	0.00
11,700.00	89.97	357.32	7,338.59	3,372.31	-244.09	3,381.07	0.00	0.00	0.00
11,800.00	89.97	357.32	7,338.64	3,472.20	-248.76	3,481.05	0.00	0.00	0.00
11,900.00	89.97	357.32	7,338.69	3,572.09	-253.43	3,581.03	0.00	0.00	0.00
12,000.00	89.97	357.32	7,338.74	3,671.98	-258.10	3,681.01	0.00	0.00	0.00
12,100.00	89.97	357.32	7,338.78	3,771.87	-262.77	3,781.00	0.00	0.00	0.00
12,200.00	89.97	357.32	7,338.83	3,871.77	-267.44	3,880.98	0.00	0.00	0.00
12,300.00	89.97	357.32	7,338.88	3,971.66	-272.11	3,980.96	0.00	0.00	0.00
12,400.00	89.97	357.32	7,338.93	4,071.55	-276.78	4,080.94	0.00	0.00	0.00
12,500.00	89.97	357.32	7,338.98	4,171.44	-281.45	4,180.92	0.00	0.00	0.00
12,600.00	89.97	357.32	7,339.03	4,271.33	-286.12	4,280.90	0.00	0.00	0.00
12,700.00	89.97	357.32	7,339.08	4,371.22	-290.79	4,380.88	0.00	0.00	0.00
12,746.83	89.97	357.32	7,339.10	4,418.00	-292.98	4,427.70	0.00	0.00	0.00
Burough 17N-17HZ PBHL Plan B									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Burough 17N-17HZ PBH	0.00	0.00	7,339.10	4,418.00	-292.98	14,548,029.60	1,697,476.90	40.058304	-104.796077
- plan hits target center									
- Point									

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BURGESS 17N-17HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB = 17' @ 4998.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB = 17' @ 4998.00usft (D Rig)
Site:	1N-66W-17 Burrough 20-17HZ Pad	North Reference:	True
Well:	BURGESS 17N-17HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	Plan A		
Design:	Permit Rev-2		

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")	
1,826.25	1,800.00	9 5/8"	9-5/8	13-1/2	
7,859.11	7,336.71	Top of Production	5-1/2	7-7/8	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,410.60	1,402.00	Fox Hills		0.00		
4,740.49	4,582.00	Sussex		0.00		
7,385.05	7,168.00	Sharon Springs		0.00		
7,416.89	7,189.00	Niobrara Top		0.00		
7,800.65	7,334.00	Niobrara B Bench		0.00		