

US ROCKIES WATTENBERG PLANNING

WELD-NAD83-UTMFT13N

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

BUROUGH 28N-17HZ

Plan A

Plan: Permit Rev-1

Standard Planning Report

05 April, 2016



Azimuths to True North
Magnetic North: 8.21°

Magnetic Field
Strength: 52437.0snT
Dip Angle: 66.59°
Date: 3/29/2016
Model: IGRF2010

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

Well: BUROUGH 28N-17HZ
Wellbore: Plan A
Design: Permit Rev-1

FORMATION TOP DETAILS

TVDPath	MDPath	Formation
1402.00	1410.60	Fox Hills
4582.00	4854.11	Sussex
7119.00	7517.49	Sharon Springs
7140.00	7547.52	Niobrara
7280.00	7825.56	Nio B

WELL DETAILS: BUROUGH 28N-17HZ

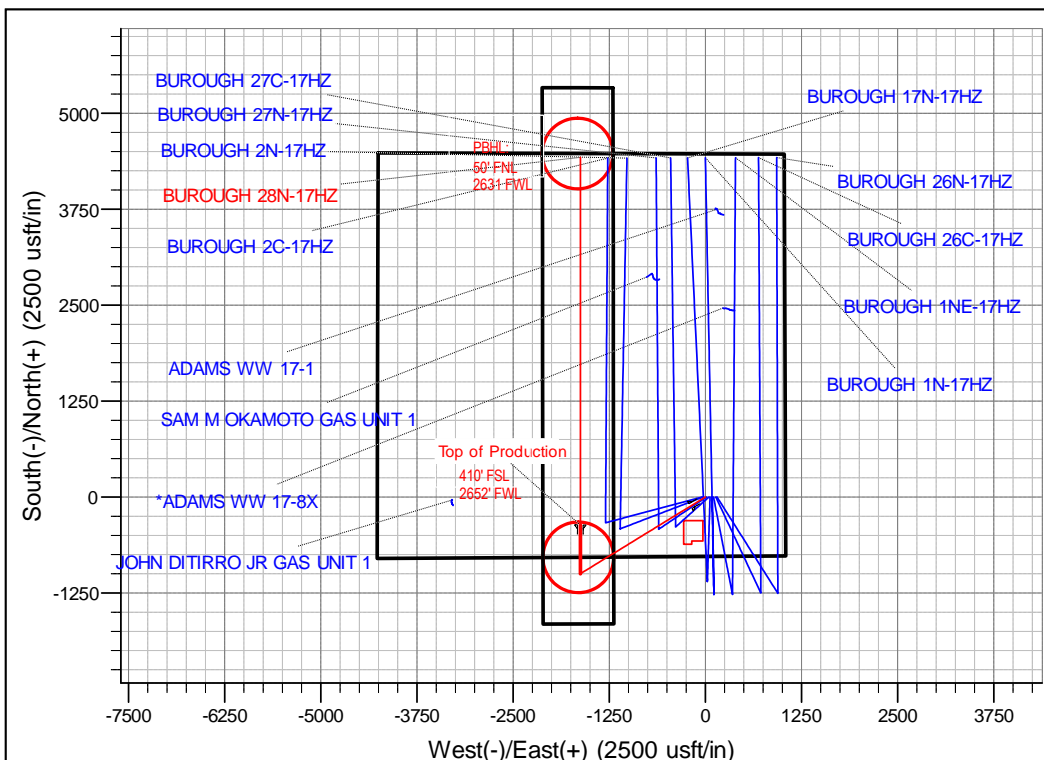
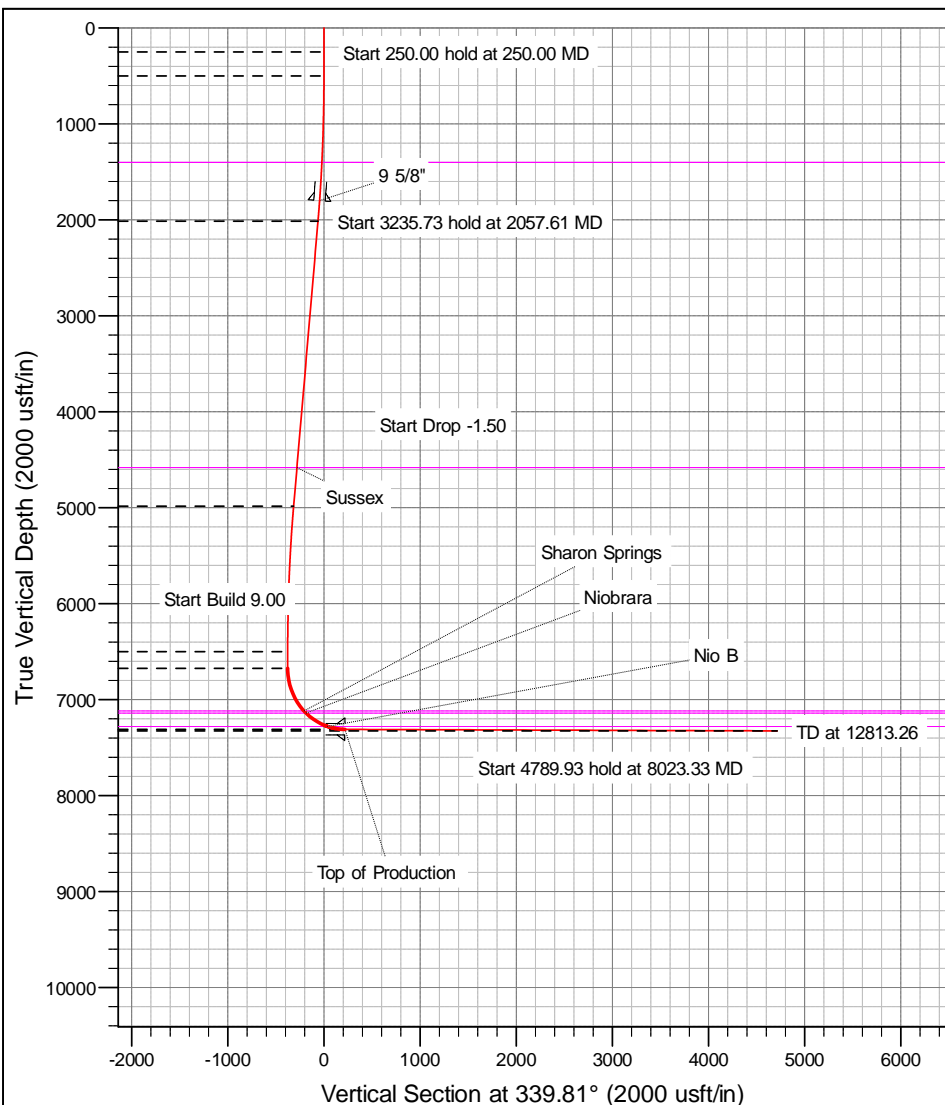
+N/-S	+E/-W	GL: 4981.00	RKB @ 4998.00usft (D Rig)	Longitude	Slot
0.00	0.00	Northing 14543612.15	Easting 1697720.16	Latitude 40.046171	-104.795244

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
2057.61	23.36	238.42	2014.80	-164.01	-266.83	1.50	-61.86
5293.33	23.36	238.42	4985.20	-835.99	-1360.01	0.00	-315.28
6850.94	0.00	0.00	6500.00	-1000.00	-1626.84	1.50	-377.13
7025.44	0.00	0.00	6674.50	-1000.00	-1626.84	0.00	-377.13
8023.33	89.81	0.00	7311.12	-365.49	-1626.84	9.00	218.39
12813.26	89.81	0.00	7327.00	4424.42	-1626.84	0.00	4714.03

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape
Borough 28N-17HZ PBHL	7327.00	4424.42	-1626.84	14548032.81	1696083.15	40.058321	-104.801058	Point



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Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BURGESS 28N-17HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 4998.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 4998.00usft (D Rig)
Site:	1N-66W-17 Burough 20-17HZ Pad	North Reference:	True
Well:	BURGESS 28N-17HZ	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		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 28N-17HZ					
Well Position	+N/-S	0.36 usft	Northing:	14,543,612.14 usft	Latitude:	40.046171
	+E/-W	45.06 usft	Easting:	1,697,720.16 usft	Longitude:	-104.795244
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	3/29/2016	8.21	66.59	52,437

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	339.81

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	
2,057.61	23.36	238.42	2,014.80	-164.01	-266.83	1.50	1.50	0.00	238.42	
5,293.33	23.36	238.42	4,985.20	-835.99	-1,360.01	0.00	0.00	0.00	0.00	
6,850.94	0.00	0.00	6,500.00	-1,000.00	-1,626.84	1.50	-1.50	0.00	180.00	
7,025.44	0.00	0.00	6,674.50	-1,000.00	-1,626.84	0.00	0.00	0.00	0.00	
8,023.33	89.81	0.00	7,311.12	-365.49	-1,626.84	9.00	9.00	0.00	0.00	
12,813.26	89.81	0.00	7,327.00	4,424.42	-1,626.84	0.00	0.00	0.00	0.00	Burrough 28N-17HZ

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Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BURGESS 28N-17HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 4998.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 4998.00usft (D Rig)
Site:	1N-66W-17 Burough 20-17HZ Pad	North Reference:	True
Well:	BURGESS 28N-17HZ	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
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	238.42	599.99	-0.69	-1.12	-0.26	1.50	1.50	0.00
700.00	3.00	238.42	699.91	-2.74	-4.46	-1.03	1.50	1.50	0.00
800.00	4.50	238.42	799.69	-6.17	-10.03	-2.33	1.50	1.50	0.00
900.00	6.00	238.42	899.27	-10.96	-17.83	-4.13	1.50	1.50	0.00
1,000.00	7.50	238.42	998.57	-17.11	-27.84	-6.45	1.50	1.50	0.00
1,100.00	9.00	238.42	1,097.54	-24.63	-40.06	-9.29	1.50	1.50	0.00
1,200.00	10.50	238.42	1,196.09	-33.49	-54.49	-12.63	1.50	1.50	0.00
1,300.00	12.00	238.42	1,294.16	-43.71	-71.11	-16.48	1.50	1.50	0.00
1,400.00	13.50	238.42	1,391.70	-55.27	-89.91	-20.84	1.50	1.50	0.00
1,410.60	13.66	238.42	1,402.00	-56.57	-92.03	-21.33	1.50	1.50	0.00
Fox Hills									
1,500.00	15.00	238.42	1,488.62	-68.16	-110.88	-25.70	1.50	1.50	0.00
1,600.00	16.50	238.42	1,584.86	-82.37	-134.00	-31.06	1.50	1.50	0.00
1,700.00	18.00	238.42	1,680.36	-97.90	-159.27	-36.92	1.50	1.50	0.00
1,800.00	19.50	238.42	1,775.05	-114.73	-186.65	-43.27	1.50	1.50	0.00
1,826.50	19.90	238.42	1,800.00	-119.41	-194.26	-45.03	1.50	1.50	0.00
9 5/8"									
1,900.00	21.00	238.42	1,868.86	-132.86	-216.14	-50.10	1.50	1.50	0.00
2,000.00	22.50	238.42	1,961.74	-152.26	-247.70	-57.42	1.50	1.50	0.00
2,057.61	23.36	238.42	2,014.80	-164.01	-266.83	-61.86	1.50	1.50	0.00
2,100.00	23.36	238.42	2,053.71	-172.82	-281.15	-65.18	0.00	0.00	0.00
2,200.00	23.36	238.42	2,145.51	-193.59	-314.93	-73.01	0.00	0.00	0.00
2,300.00	23.36	238.42	2,237.31	-214.35	-348.72	-80.84	0.00	0.00	0.00
2,400.00	23.36	238.42	2,329.11	-235.12	-382.50	-88.67	0.00	0.00	0.00
2,500.00	23.36	238.42	2,420.92	-255.89	-416.29	-96.50	0.00	0.00	0.00
2,600.00	23.36	238.42	2,512.72	-276.65	-450.07	-104.34	0.00	0.00	0.00
2,700.00	23.36	238.42	2,604.52	-297.42	-483.86	-112.17	0.00	0.00	0.00
2,800.00	23.36	238.42	2,696.32	-318.19	-517.64	-120.00	0.00	0.00	0.00
2,900.00	23.36	238.42	2,788.12	-338.96	-551.43	-127.83	0.00	0.00	0.00
3,000.00	23.36	238.42	2,879.92	-359.72	-585.21	-135.66	0.00	0.00	0.00
3,100.00	23.36	238.42	2,971.72	-380.49	-619.00	-143.50	0.00	0.00	0.00
3,200.00	23.36	238.42	3,063.52	-401.26	-652.78	-151.33	0.00	0.00	0.00
3,300.00	23.36	238.42	3,155.32	-422.03	-686.57	-159.16	0.00	0.00	0.00
3,400.00	23.36	238.42	3,247.12	-442.79	-720.35	-166.99	0.00	0.00	0.00
3,500.00	23.36	238.42	3,338.92	-463.56	-754.14	-174.82	0.00	0.00	0.00
3,600.00	23.36	238.42	3,430.72	-484.33	-787.92	-182.66	0.00	0.00	0.00
3,700.00	23.36	238.42	3,522.52	-505.09	-821.71	-190.49	0.00	0.00	0.00
3,800.00	23.36	238.42	3,614.32	-525.86	-855.49	-198.32	0.00	0.00	0.00
3,900.00	23.36	238.42	3,706.12	-546.63	-889.28	-206.15	0.00	0.00	0.00
4,000.00	23.36	238.42	3,797.92	-567.40	-923.06	-213.98	0.00	0.00	0.00
4,100.00	23.36	238.42	3,889.72	-588.16	-956.85	-221.82	0.00	0.00	0.00
4,200.00	23.36	238.42	3,981.52	-608.93	-990.63	-229.65	0.00	0.00	0.00
4,300.00	23.36	238.42	4,073.32	-629.70	-1,024.42	-237.48	0.00	0.00	0.00
4,400.00	23.36	238.42	4,165.12	-650.46	-1,058.20	-245.31	0.00	0.00	0.00
4,500.00	23.36	238.42	4,256.92	-671.23	-1,091.99	-253.14	0.00	0.00	0.00
4,600.00	23.36	238.42	4,348.72	-692.00	-1,125.77	-260.98	0.00	0.00	0.00
4,700.00	23.36	238.42	4,440.52	-712.77	-1,159.56	-268.81	0.00	0.00	0.00

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Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BURGESS 28N-17HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 4998.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 4998.00usft (D Rig)
Site:	1N-66W-17 Burough 20-17HZ Pad	North Reference:	True
Well:	BURGESS 28N-17HZ	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)
4,800.00	23.36	238.42	4,532.32	-733.53	-1,193.34	-276.64	0.00	0.00	0.00
4,854.11	23.36	238.42	4,582.00	-744.77	-1,211.62	-280.88	0.00	0.00	0.00
Sussex									
4,900.00	23.36	238.42	4,624.12	-754.30	-1,227.13	-284.47	0.00	0.00	0.00
5,000.00	23.36	238.42	4,715.92	-775.07	-1,260.91	-292.30	0.00	0.00	0.00
5,100.00	23.36	238.42	4,807.72	-795.84	-1,294.70	-300.14	0.00	0.00	0.00
5,200.00	23.36	238.42	4,899.52	-816.60	-1,328.48	-307.97	0.00	0.00	0.00
5,293.33	23.36	238.42	4,985.20	-835.99	-1,360.01	-315.28	0.00	0.00	0.00
5,300.00	23.26	238.42	4,991.33	-837.37	-1,362.26	-315.80	1.50	-1.50	0.00
5,400.00	21.76	238.42	5,083.70	-857.42	-1,394.88	-323.36	1.50	-1.50	0.00
5,500.00	20.26	238.42	5,177.05	-876.20	-1,425.43	-330.44	1.50	-1.50	0.00
5,600.00	18.76	238.42	5,271.30	-893.69	-1,453.89	-337.04	1.50	-1.50	0.00
5,700.00	17.26	238.42	5,366.40	-909.88	-1,480.23	-343.15	1.50	-1.50	0.00
5,800.00	15.76	238.42	5,462.27	-924.77	-1,504.45	-348.76	1.50	-1.50	0.00
5,900.00	14.26	238.42	5,558.85	-938.33	-1,526.52	-353.88	1.50	-1.50	0.00
6,000.00	12.76	238.42	5,656.08	-950.57	-1,546.42	-358.49	1.50	-1.50	0.00
6,100.00	11.26	238.42	5,753.89	-961.47	-1,564.16	-362.60	1.50	-1.50	0.00
6,200.00	9.76	238.42	5,852.21	-971.02	-1,579.70	-366.20	1.50	-1.50	0.00
6,300.00	8.26	238.42	5,950.97	-979.23	-1,593.05	-369.30	1.50	-1.50	0.00
6,400.00	6.76	238.42	6,050.11	-986.08	-1,604.19	-371.88	1.50	-1.50	0.00
6,500.00	5.26	238.42	6,149.55	-991.56	-1,613.12	-373.95	1.50	-1.50	0.00
6,600.00	3.76	238.42	6,249.24	-995.69	-1,619.82	-375.51	1.50	-1.50	0.00
6,700.00	2.26	238.42	6,349.10	-998.44	-1,624.30	-376.54	1.50	-1.50	0.00
6,800.00	0.76	238.42	6,449.06	-999.82	-1,626.55	-377.07	1.50	-1.50	0.00
6,850.94	0.00	0.00	6,500.00	-1,000.00	-1,626.84	-377.13	1.50	-1.50	0.00
6,900.00	0.00	0.00	6,549.06	-1,000.00	-1,626.84	-377.13	0.00	0.00	0.00
7,000.00	0.00	0.00	6,649.06	-1,000.00	-1,626.84	-377.13	0.00	0.00	0.00
7,025.44	0.00	0.00	6,674.50	-1,000.00	-1,626.84	-377.13	0.00	0.00	0.00
7,100.00	6.71	0.00	6,748.89	-995.64	-1,626.84	-373.04	9.00	9.00	0.00
7,200.00	15.71	0.00	6,846.88	-976.22	-1,626.84	-354.81	9.00	9.00	0.00
7,300.00	24.71	0.00	6,940.63	-941.71	-1,626.84	-322.42	9.00	9.00	0.00
7,400.00	33.71	0.00	7,027.82	-892.95	-1,626.84	-276.66	9.00	9.00	0.00
7,500.00	42.71	0.00	7,106.32	-831.16	-1,626.84	-218.67	9.00	9.00	0.00
7,517.49	44.28	0.00	7,119.00	-819.13	-1,626.84	-207.37	9.00	9.00	0.00
Sharon Springs									
7,547.52	46.99	0.00	7,140.00	-797.65	-1,626.84	-187.22	9.00	9.00	0.00
Niobrara									
7,600.00	51.71	0.00	7,174.18	-757.85	-1,626.84	-149.86	9.00	9.00	0.00
7,700.00	60.71	0.00	7,229.73	-674.83	-1,626.84	-71.94	9.00	9.00	0.00
7,800.00	69.71	0.00	7,271.62	-584.14	-1,626.84	13.18	9.00	9.00	0.00
7,825.57	72.01	0.00	7,280.00	-559.99	-1,626.84	35.85	9.00	9.00	0.00
Nio B									
7,900.00	78.71	0.00	7,298.80	-488.01	-1,626.84	103.40	9.00	9.00	0.00
8,000.00	87.71	0.00	7,310.61	-388.81	-1,626.84	196.51	9.00	9.00	0.00
8,023.33	89.81	0.00	7,311.12	-365.49	-1,626.84	218.40	9.00	9.00	0.00
Top of Production									
8,100.00	89.81	0.00	7,311.37	-288.82	-1,626.84	290.36	0.00	0.00	0.00
8,200.00	89.81	0.00	7,311.70	-188.82	-1,626.84	384.21	0.00	0.00	0.00
8,300.00	89.81	0.00	7,312.03	-88.82	-1,626.84	478.07	0.00	0.00	0.00
8,400.00	89.81	0.00	7,312.37	11.18	-1,626.84	571.92	0.00	0.00	0.00
8,500.00	89.81	0.00	7,312.70	111.18	-1,626.84	665.78	0.00	0.00	0.00
8,600.00	89.81	0.00	7,313.03	211.18	-1,626.84	759.63	0.00	0.00	0.00
8,700.00	89.81	0.00	7,313.36	311.18	-1,626.84	853.49	0.00	0.00	0.00

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Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BURGESS 28N-17HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 4998.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 4998.00usft (D Rig)
Site:	1N-66W-17 Burough 20-17HZ Pad	North Reference:	True
Well:	BURGESS 28N-17HZ	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)	
8,800.00	89.81	0.00	7,313.69	411.18	-1,626.84	947.35	0.00	0.00	0.00	
8,900.00	89.81	0.00	7,314.02	511.18	-1,626.84	1,041.20	0.00	0.00	0.00	
9,000.00	89.81	0.00	7,314.35	611.18	-1,626.84	1,135.06	0.00	0.00	0.00	
9,100.00	89.81	0.00	7,314.69	711.17	-1,626.84	1,228.91	0.00	0.00	0.00	
9,200.00	89.81	0.00	7,315.02	811.17	-1,626.84	1,322.77	0.00	0.00	0.00	
9,300.00	89.81	0.00	7,315.35	911.17	-1,626.84	1,416.63	0.00	0.00	0.00	
9,400.00	89.81	0.00	7,315.68	1,011.17	-1,626.84	1,510.48	0.00	0.00	0.00	
9,500.00	89.81	0.00	7,316.01	1,111.17	-1,626.84	1,604.34	0.00	0.00	0.00	
9,600.00	89.81	0.00	7,316.34	1,211.17	-1,626.84	1,698.19	0.00	0.00	0.00	
9,700.00	89.81	0.00	7,316.68	1,311.17	-1,626.84	1,792.05	0.00	0.00	0.00	
9,800.00	89.81	0.00	7,317.01	1,411.17	-1,626.84	1,885.91	0.00	0.00	0.00	
9,900.00	89.81	0.00	7,317.34	1,511.17	-1,626.84	1,979.76	0.00	0.00	0.00	
10,000.00	89.81	0.00	7,317.67	1,611.17	-1,626.84	2,073.62	0.00	0.00	0.00	
10,100.00	89.81	0.00	7,318.00	1,711.17	-1,626.84	2,167.47	0.00	0.00	0.00	
10,200.00	89.81	0.00	7,318.33	1,811.17	-1,626.84	2,261.33	0.00	0.00	0.00	
10,300.00	89.81	0.00	7,318.67	1,911.17	-1,626.84	2,355.18	0.00	0.00	0.00	
10,400.00	89.81	0.00	7,319.00	2,011.17	-1,626.84	2,449.04	0.00	0.00	0.00	
10,500.00	89.81	0.00	7,319.33	2,111.17	-1,626.84	2,542.90	0.00	0.00	0.00	
10,600.00	89.81	0.00	7,319.66	2,211.17	-1,626.84	2,636.75	0.00	0.00	0.00	
10,700.00	89.81	0.00	7,319.99	2,311.17	-1,626.84	2,730.61	0.00	0.00	0.00	
10,800.00	89.81	0.00	7,320.32	2,411.17	-1,626.84	2,824.46	0.00	0.00	0.00	
10,900.00	89.81	0.00	7,320.66	2,511.16	-1,626.84	2,918.32	0.00	0.00	0.00	
11,000.00	89.81	0.00	7,320.99	2,611.16	-1,626.84	3,012.18	0.00	0.00	0.00	
11,100.00	89.81	0.00	7,321.32	2,711.16	-1,626.84	3,106.03	0.00	0.00	0.00	
11,200.00	89.81	0.00	7,321.65	2,811.16	-1,626.84	3,199.89	0.00	0.00	0.00	
11,300.00	89.81	0.00	7,321.98	2,911.16	-1,626.84	3,293.74	0.00	0.00	0.00	
11,400.00	89.81	0.00	7,322.31	3,011.16	-1,626.84	3,387.60	0.00	0.00	0.00	
11,500.00	89.81	0.00	7,322.65	3,111.16	-1,626.84	3,481.45	0.00	0.00	0.00	
11,600.00	89.81	0.00	7,322.98	3,211.16	-1,626.84	3,575.31	0.00	0.00	0.00	
11,700.00	89.81	0.00	7,323.31	3,311.16	-1,626.84	3,669.17	0.00	0.00	0.00	
11,800.00	89.81	0.00	7,323.64	3,411.16	-1,626.84	3,763.02	0.00	0.00	0.00	
11,900.00	89.81	0.00	7,323.97	3,511.16	-1,626.84	3,856.88	0.00	0.00	0.00	
12,000.00	89.81	0.00	7,324.30	3,611.16	-1,626.84	3,950.73	0.00	0.00	0.00	
12,100.00	89.81	0.00	7,324.63	3,711.16	-1,626.84	4,044.59	0.00	0.00	0.00	
12,200.00	89.81	0.00	7,324.97	3,811.16	-1,626.84	4,138.45	0.00	0.00	0.00	
12,300.00	89.81	0.00	7,325.30	3,911.16	-1,626.84	4,232.30	0.00	0.00	0.00	
12,400.00	89.81	0.00	7,325.63	4,011.16	-1,626.84	4,326.16	0.00	0.00	0.00	
12,500.00	89.81	0.00	7,325.96	4,111.16	-1,626.84	4,420.01	0.00	0.00	0.00	
12,600.00	89.81	0.00	7,326.29	4,211.16	-1,626.84	4,513.87	0.00	0.00	0.00	
12,700.00	89.81	0.00	7,326.62	4,311.16	-1,626.84	4,607.72	0.00	0.00	0.00	
12,800.00	89.81	0.00	7,326.96	4,411.15	-1,626.84	4,701.58	0.00	0.00	0.00	
12,813.26	89.81	0.00	7,327.00	4,424.42	-1,626.84	4,714.03	0.00	0.00	0.00	
Burrough 28N-17HZ PBHL										

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										
Burrough 28N-17HZ PF	0.00	0.00	7,327.00	4,424.42	-1,626.84	14,548,032.81	1,696,083.15	40.058321	-104.801058	
- plan hits target center										
- Point										

Anadarko

Planning Report

Database:	PLANNING	Local Co-ordinate Reference:	Well BURGESS 28N-17HZ
Company:	US ROCKIES WATTENBERG PLANNING	TVD Reference:	RKB @ 4998.00usft (D Rig)
Project:	WELD-NAD83-UTMFT13N	MD Reference:	RKB @ 4998.00usft (D Rig)
Site:	1N-66W-17 Burrough 20-17HZ Pad	North Reference:	True
Well:	BURGESS 28N-17HZ	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 (")	
1,826.50	1,800.00	9 5/8"	9-5/8	13-1/2	
8,023.33	7,311.12	Top of Production	5-1/2	8-3/4	

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,410.60	1,402.00	Fox Hills		0.00		
4,854.11	4,582.00	Sussex		0.00		
7,517.49	7,119.00	Sharon Springs		0.00		
7,547.52	7,140.00	Niobrara		0.00		
7,825.57	7,280.00	Nio B		0.00		