

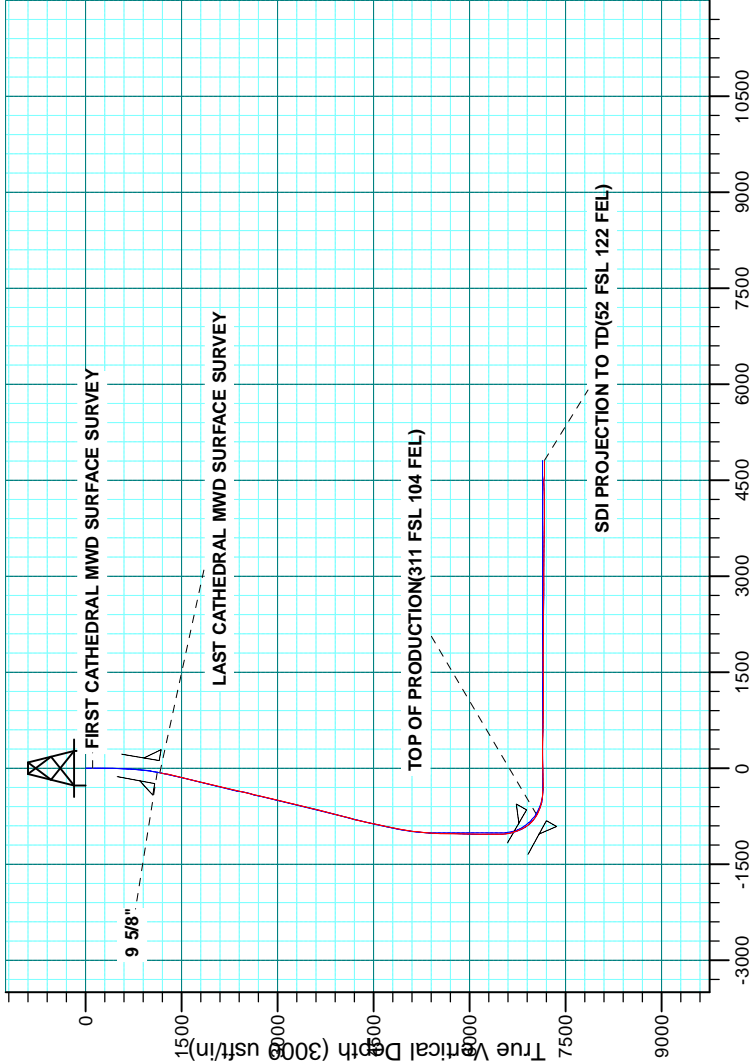


Project: WELD-NAD83-UTMFT13N
Site: 3N-65W-28 Cheese 1-28HZ Pad
Well: Cheese 38C-28HZ
Wellbore: Plan A
Design: Plan A



WELL DETAILS: Cheese 38C-28HZ				
GL 4815 & KB 25 @ 40.99usft (HP 307)				
+N/-S 0.00	+E/-W 0.00	Northing 14600656.88	Easting 1734789.01	Latitude 40.202511 Longitude -104.662017

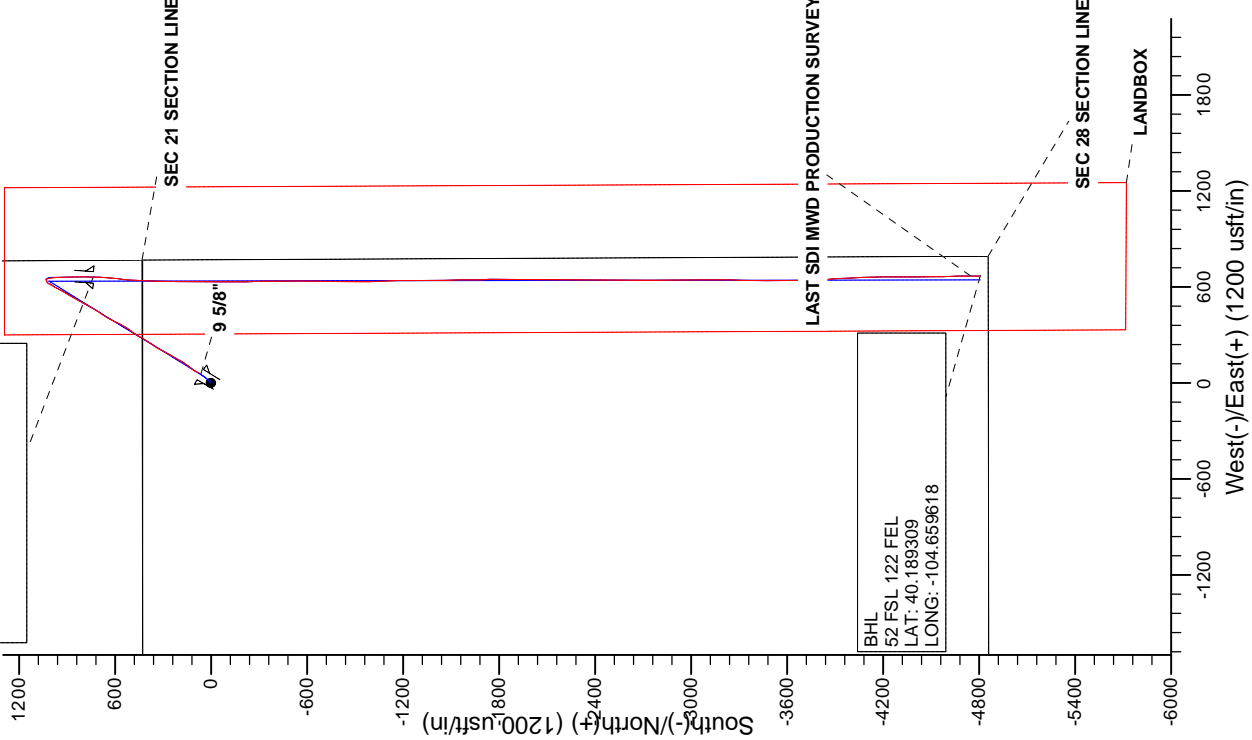
PROJECT DETAILS: WELD-NAD83-UTMFT13N	
Geodetic System:	Universal Transverse Mercator (US Survey Feet)
Datum:	North American Datum 1983
Ellipsoid:	GRS 1980
Zone:	Zone 13N (108 W to 102 W)
Location:	SECTION 28 T3N R65W
System Datum:	Mean Sea Level



Vertical Section at 179.95° (3000 usft/in)

Survey: Survey #2 SDI MWD PRODUCTION (Cheese 38C-28HZ/Plan A)	
Created By: R.Scott	Date: 15:35, July 07 2015

TOP OF PRODUCTION
311 FSL 104 FEL
LAT: 40.204530
LONG:-104.659639



BHL
52 FSL 122 FEL
LAT: 40.189309
LONG:-104.659618

Company:	US ROCKIES WATTENBERG PLANNING	Local Co-ordinate Reference:	Well Cheese 38C-28HZ
Project:	WELD-NAD83-UTMFT13N	TVD Reference:	GL 4815 & KB 25 @ 4840.99usft (HP 307)
Site:	3N-65W-28 Cheese 1-28HZ Pad	MD Reference:	GL 4815 & KB 25 @ 4840.99usft (HP 307)
Well:	Cheese 38C-28HZ	North Reference:	True
Wellbore:	Plan A	Survey Calculation Method:	Minimum Curvature
Design:	Plan A	Database:	Denver Sales

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-65W-28 Cheese 1-28HZ Pad, SECTION 28 T3N R65W				
Site Position:		Northing:	14,600,657.57 usft	Latitude:	40.202514
From:	Lat/Long	Easting:	1,734,684.02 usft	Longitude:	-104.662393
Position Uncertainty:	0.00 usft	Slot Radius:	13.200 in	Grid Convergence:	0.22 °

Well	Cheese 38C-28HZ, 429' FNL 770' FEL					
Well Position	+N/-S	0.00 usft	Northing:	14,600,656.87 usft	Latitude:	40.202511
	+E/-W	0.00 usft	Easting:	1,734,789.01 usft	Longitude:	-104.662017
Position Uncertainty		0.00 usft	Wellhead Elevation:	0.00 usft	Ground Level:	4,815.99 usft

Wellbore	Plan A				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/9/2014	8.35	66.79	52,689

Design	Plan A				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0.00	0.00	0.00	179.95	

Survey Program	Date	7/7/2015			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
20.00	1,167.00	Survey #1 CATHEDRAL MWD SURFACE	APC_ISCWSA REV 2 MWD	Fixed:v2:standard declination	
1,287.00	12,863.00	Survey #2 SDI MWD PRODUCTION (Plan	APC_ISCWSA REV 2 MWD+	Fixed:v2:crustal field declination	

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	
20.00	0.00	0.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	
104.00	0.40	46.00	104.00	0.20	0.21	-0.20	0.48	0.48	0.00	
FIRST CATHEDRAL MWD SURFACE SURVEY										
168.00	0.30	141.90	168.00	0.23	0.48	-0.23	0.82	-0.16	149.84	
226.00	0.30	81.60	226.00	0.13	0.72	-0.13	0.52	0.00	-103.97	
283.00	0.40	25.00	283.00	0.33	0.95	-0.33	0.60	0.18	-99.30	
340.00	1.10	37.70	339.99	0.95	1.37	-0.94	1.25	1.23	22.28	
404.00	1.70	24.30	403.97	2.30	2.14	-2.29	1.06	0.94	-20.94	
468.00	2.70	36.20	467.92	4.38	3.42	-4.38	1.71	1.56	18.59	

Company:	US ROCKIES WATTENBERG PLANNING	Local Co-ordinate Reference:	Well Cheese 38C-28HZ
Project:	WELD-NAD83-UTMFT13N	TVD Reference:	GL 4815 & KB 25 @ 4840.99usft (HP 307)
Site:	3N-65W-28 Cheese 1-28HZ Pad	MD Reference:	GL 4815 & KB 25 @ 4840.99usft (HP 307)
Well:	Cheese 38C-28HZ	North Reference:	True
Wellbore:	Plan A	Survey Calculation Method:	Minimum Curvature
Design:	Plan A	Database:	Denver Sales

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)	
532.00	2.90	45.00	531.85	6.74	5.45	-6.73	0.74	0.31	13.75	
596.00	4.00	41.10	595.73	9.57	8.06	-9.56	1.76	1.72	-6.09	
660.00	4.90	50.90	659.54	12.97	11.65	-12.96	1.84	1.41	15.31	
724.00	6.00	48.10	723.25	16.93	16.26	-16.92	1.77	1.72	-4.38	
788.00	6.90	46.30	786.84	21.82	21.53	-21.80	1.44	1.41	-2.81	
851.00	7.50	41.70	849.35	27.50	27.00	-27.48	1.32	0.95	-7.30	
915.00	8.40	39.40	912.73	34.24	32.75	-34.21	1.49	1.41	-3.59	
979.00	9.80	35.60	975.92	42.28	38.89	-42.24	2.38	2.19	-5.94	
1,041.00	11.10	34.00	1,036.89	51.52	45.30	-51.48	2.15	2.10	-2.58	
1,106.00	11.90	32.80	1,100.59	62.34	52.43	-62.29	1.28	1.23	-1.85	
1,121.00	12.10	32.23	1,115.26	64.97	54.10	-64.92	1.52	1.30	-3.78	
9 5/8"										
1,167.00	12.70	30.60	1,160.19	73.39	59.25	-73.34	1.52	1.32	-3.55	
LAST CATHEDRAL MWD SURFACE SURVEY										
1,287.00	14.78	32.59	1,276.75	97.65	74.21	-97.58	1.78	1.73	1.66	
FIRST SDI MWD PRODUCTION SURVEY										
1,382.00	16.67	34.67	1,368.19	119.07	88.49	-118.99	2.08	1.99	2.19	
1,476.00	16.22	36.08	1,458.35	140.77	103.89	-140.67	0.64	-0.48	1.50	
1,571.00	16.11	36.53	1,549.59	162.08	119.55	-161.97	0.18	-0.12	0.47	
1,665.00	15.64	29.59	1,640.01	183.58	133.57	-183.46	2.08	-0.50	-7.38	
1,760.00	14.45	27.64	1,731.76	205.22	145.39	-205.09	1.36	-1.25	-2.05	
1,854.00	15.96	31.63	1,822.46	226.61	157.61	-226.47	1.95	1.61	4.24	
1,949.00	14.98	29.01	1,914.02	248.47	170.41	-248.32	1.27	-1.03	-2.76	
2,043.00	15.69	29.22	2,004.68	270.19	182.51	-270.03	0.76	0.76	0.22	
2,137.00	16.11	29.01	2,095.08	292.69	195.04	-292.52	0.45	0.45	-0.22	
2,231.00	15.94	26.24	2,185.43	315.67	207.07	-315.49	0.83	-0.18	-2.95	
2,326.00	15.27	34.13	2,276.94	337.73	219.86	-337.54	2.34	-0.71	8.31	
2,420.00	13.97	34.10	2,367.89	357.37	233.17	-357.17	1.38	-1.38	-0.03	
2,515.00	14.51	30.48	2,459.97	377.12	245.63	-376.91	1.10	0.57	-3.81	
2,610.00	14.44	33.00	2,551.96	397.31	258.12	-397.09	0.67	-0.07	2.65	
2,704.00	15.29	31.92	2,642.81	417.66	271.06	-417.43	0.95	0.90	-1.15	
2,799.00	15.69	28.97	2,734.36	439.53	283.90	-439.29	0.93	0.42	-3.11	
2,893.00	15.95	34.03	2,824.81	461.36	297.29	-461.10	1.49	0.28	5.38	
2,987.00	16.02	33.50	2,915.17	482.88	311.68	-482.61	0.17	0.07	-0.56	
3,082.00	15.27	37.91	3,006.65	503.68	326.60	-503.40	1.48	-0.79	4.64	
3,176.00	15.44	29.97	3,097.31	524.29	340.46	-523.99	2.24	0.18	-8.45	
3,271.00	15.44	32.73	3,188.88	545.88	353.61	-545.57	0.77	0.00	2.91	
3,365.00	15.43	27.45	3,279.50	567.51	366.14	-567.19	1.49	-0.01	-5.62	
3,460.00	15.42	24.02	3,371.08	590.26	377.11	-589.93	0.96	-0.01	-3.61	
3,554.00	15.48	26.44	3,461.68	612.91	387.78	-612.57	0.69	0.06	2.57	
3,649.00	15.67	29.36	3,553.19	635.44	399.72	-635.09	0.85	0.20	3.07	
3,743.00	15.33	31.22	3,643.77	657.13	412.38	-656.77	0.64	-0.36	1.98	
3,838.00	16.38	33.46	3,735.16	679.05	426.28	-678.67	1.28	1.11	2.36	
3,932.00	17.32	36.86	3,825.13	701.30	441.98	-700.91	1.45	1.00	3.62	

Company:	US ROCKIES WATTENBERG PLANNING	Local Co-ordinate Reference:	Well Cheese 38C-28HZ
Project:	WELD-NAD83-UTMFT13N	TVD Reference:	GL 4815 & KB 25 @ 4840.99usft (HP 307)
Site:	3N-65W-28 Cheese 1-28HZ Pad	MD Reference:	GL 4815 & KB 25 @ 4840.99usft (HP 307)
Well:	Cheese 38C-28HZ	North Reference:	True
Wellbore:	Plan A	Survey Calculation Method:	Minimum Curvature
Design:	Plan A	Database:	Denver Sales

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)
4,026.00	17.38	29.37	3,914.86	724.73	457.26	-724.33	2.38	0.06	-7.97
4,121.00	17.50	28.06	4,005.49	749.70	470.94	-749.29	0.43	0.13	-1.38
4,215.00	17.17	27.81	4,095.22	774.45	484.06	-774.02	0.36	-0.35	-0.27
4,310.00	15.45	30.10	4,186.40	797.80	496.95	-797.36	1.93	-1.81	2.41
4,404.00	16.65	30.41	4,276.73	820.25	510.04	-819.80	1.28	1.28	0.33
4,499.00	14.42	29.69	4,368.26	842.26	522.79	-841.81	2.36	-2.35	-0.76
4,593.00	14.95	30.53	4,459.18	862.87	534.75	-862.41	0.61	0.56	0.89
4,687.00	14.33	31.59	4,550.13	883.23	547.00	-882.75	0.72	-0.66	1.13
4,782.00	13.71	31.21	4,642.30	902.87	558.99	-902.38	0.66	-0.65	-0.40
4,876.00	12.38	29.44	4,733.87	921.17	569.72	-920.68	1.48	-1.41	-1.88
4,971.00	11.42	28.35	4,826.83	938.32	579.19	-937.81	1.04	-1.01	-1.15
5,065.00	10.88	25.23	4,919.06	954.54	587.39	-954.02	0.86	-0.57	-3.32
5,160.00	10.82	29.93	5,012.36	970.37	595.66	-969.85	0.93	-0.06	4.95
5,254.00	10.74	28.47	5,104.70	985.72	604.24	-985.19	0.30	-0.09	-1.55
5,349.00	7.73	32.02	5,198.46	998.92	611.85	-998.39	3.22	-3.17	3.74
5,443.00	6.40	29.36	5,291.75	1,008.85	617.77	-1,008.31	1.46	-1.41	-2.83
5,538.00	4.97	28.48	5,386.28	1,017.08	622.33	-1,016.54	1.51	-1.51	-0.93
5,633.00	3.75	45.27	5,481.00	1,022.88	626.50	-1,022.34	1.85	-1.28	17.67
5,727.00	3.40	67.84	5,574.83	1,026.10	631.26	-1,025.55	1.53	-0.37	24.01
5,822.00	1.82	108.81	5,669.73	1,026.67	635.30	-1,026.12	2.47	-1.66	43.13
5,916.00	1.66	72.08	5,763.69	1,026.61	638.01	-1,026.06	1.18	-0.17	-39.07
6,011.00	2.10	52.26	5,858.64	1,028.10	640.70	-1,027.54	0.82	0.46	-20.86
6,106.00	2.07	54.79	5,953.58	1,030.16	643.47	-1,029.59	0.10	-0.03	2.66
6,200.00	0.48	48.33	6,047.55	1,031.40	645.16	-1,030.83	1.70	-1.69	-6.87
6,295.00	0.57	54.56	6,142.55	1,031.94	645.84	-1,031.37	0.11	0.09	6.56
6,389.00	0.47	232.84	6,236.55	1,031.97	645.91	-1,031.41	1.11	-0.11	189.66
6,483.00	0.63	44.39	6,330.54	1,032.11	645.97	-1,031.55	1.17	0.17	182.50
6,578.00	1.41	67.11	6,425.53	1,032.94	647.41	-1,032.37	0.91	0.82	23.92
6,672.00	5.37	154.30	6,519.38	1,029.42	650.38	-1,028.85	5.83	4.21	92.76
6,767.00	9.54	165.96	6,613.56	1,017.77	654.22	-1,017.20	4.65	4.39	12.27
6,861.00	17.97	172.03	6,704.79	995.81	658.13	-995.24	9.09	8.97	6.46
6,956.00	25.35	181.65	6,793.05	960.91	659.58	-960.34	8.60	7.77	10.13
7,051.00	31.51	177.80	6,876.56	915.73	659.95	-915.15	6.76	6.48	-4.05
7,145.00	43.69	176.58	6,950.89	858.56	662.84	-857.98	12.98	12.96	-1.30
7,239.00	55.56	179.81	7,011.68	787.12	664.91	-786.54	12.89	12.63	3.44
7,300.00	60.72	182.33	7,043.88	735.35	663.91	-734.77	9.15	8.45	4.13
TOP OF PRODUCTION(311 FSL 104 FEL)									
7,334.00	63.61	183.62	7,059.75	705.33	662.35	-704.75	9.15	8.51	3.80
7,428.00	70.38	185.64	7,096.47	619.15	655.33	-618.57	7.47	7.20	2.15
7,523.00	76.85	186.24	7,123.26	528.54	645.90	-527.98	6.84	6.81	0.63
7,617.00	82.64	182.87	7,139.99	436.39	638.58	-435.83	7.10	6.16	-3.59
7,712.00	87.85	181.06	7,147.86	341.81	635.34	-341.25	5.80	5.48	-1.91
7,807.00	90.88	180.28	7,148.91	246.83	634.23	-246.28	3.29	3.19	-0.82

Company:	US ROCKIES WATTENBERG PLANNING	Local Co-ordinate Reference:	Well Cheese 38C-28HZ
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Site:	3N-65W-28 Cheese 1-28HZ Pad	MD Reference:	GL 4815 & KB 25 @ 4840.99usft (HP 307)
Well:	Cheese 38C-28HZ	North Reference:	True
Wellbore:	Plan A	Survey Calculation Method:	Minimum Curvature
Design:	Plan A	Database:	Denver Sales

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)	
7,901.00	93.09	180.94	7,145.66	152.90	633.23	-152.35	2.45	2.35	0.70	
7,996.00	90.61	179.87	7,142.59	57.96	632.56	-57.41	2.84	-2.61	-1.13	
8,090.00	89.03	179.45	7,142.89	-36.04	633.12	36.59	1.74	-1.68	-0.45	
8,184.00	90.07	180.31	7,143.62	-130.03	633.31	130.58	1.44	1.11	0.91	
8,279.00	90.13	179.08	7,143.46	-225.03	633.82	225.58	1.30	0.06	-1.29	
8,373.00	90.07	178.49	7,143.29	-319.00	635.81	319.56	0.63	-0.06	-0.63	
8,468.00	90.07	179.65	7,143.18	-413.99	637.35	414.55	1.22	0.00	1.22	
8,562.00	88.99	179.09	7,143.95	-507.98	638.39	508.54	1.29	-1.15	-0.60	
8,657.00	89.83	180.62	7,144.93	-602.97	638.63	603.53	1.84	0.88	1.61	
8,751.00	90.61	180.89	7,144.57	-696.96	637.39	697.52	0.88	0.83	0.29	
8,846.00	89.33	180.78	7,144.62	-791.95	636.01	792.50	1.35	-1.35	-0.12	
8,940.00	89.16	180.39	7,145.86	-885.94	635.05	886.49	0.45	-0.18	-0.41	
9,035.00	89.43	179.65	7,147.02	-980.93	635.01	981.48	0.83	0.28	-0.78	
9,130.00	89.97	179.14	7,147.52	-1,075.92	636.02	1,076.48	0.78	0.57	-0.54	
9,224.00	88.96	178.87	7,148.40	-1,169.90	637.65	1,170.46	1.11	-1.07	-0.29	
9,319.00	90.27	179.52	7,149.04	-1,264.89	638.98	1,265.44	1.54	1.38	0.68	
9,413.00	90.30	179.15	7,148.57	-1,358.88	640.07	1,359.44	0.39	0.03	-0.39	
9,508.00	91.31	179.15	7,147.24	-1,453.86	641.48	1,454.42	1.06	1.06	0.00	
9,602.00	89.09	178.14	7,146.91	-1,547.82	643.71	1,548.39	2.59	-2.36	-1.07	
9,697.00	89.80	179.37	7,147.83	-1,642.80	645.77	1,643.36	1.49	0.75	1.29	
9,791.00	89.53	178.35	7,148.38	-1,736.77	647.64	1,737.34	1.12	-0.29	-1.09	
9,886.00	87.24	180.00	7,151.05	-1,831.72	649.01	1,832.28	2.97	-2.41	1.74	
9,980.00	90.94	181.43	7,152.55	-1,925.68	647.83	1,926.24	4.22	3.94	1.52	
10,075.00	89.97	181.47	7,151.79	-2,020.64	645.43	2,021.21	1.02	-1.02	0.04	
10,169.00	90.77	180.55	7,151.19	-2,114.63	643.77	2,115.19	1.30	0.85	-0.98	
10,264.00	88.93	180.40	7,151.43	-2,209.62	642.99	2,210.18	1.94	-1.94	-0.16	
10,358.00	89.97	180.20	7,152.34	-2,303.61	642.49	2,304.17	1.13	1.11	-0.21	
10,453.00	90.91	180.36	7,151.61	-2,398.61	642.03	2,399.17	1.00	0.99	0.17	
10,547.00	89.70	180.55	7,151.11	-2,492.60	641.28	2,493.16	1.30	-1.29	0.20	
10,642.00	89.16	179.89	7,152.05	-2,587.59	640.92	2,588.15	0.90	-0.57	-0.69	
10,736.00	88.62	179.21	7,153.87	-2,681.57	641.66	2,682.13	0.92	-0.57	-0.72	
10,830.00	90.30	180.34	7,154.76	-2,775.56	642.03	2,776.12	2.15	1.79	1.20	
10,925.00	90.84	180.46	7,153.81	-2,870.55	641.36	2,871.11	0.58	0.57	0.13	
11,019.00	89.30	179.62	7,153.70	-2,964.55	641.30	2,965.11	1.87	-1.64	-0.89	
11,114.00	88.72	178.93	7,155.34	-3,059.53	642.50	3,060.09	0.95	-0.61	-0.73	
11,208.00	89.16	180.09	7,157.08	-3,153.51	643.30	3,154.07	1.32	0.47	1.23	
11,303.00	90.74	181.36	7,157.16	-3,248.49	642.10	3,249.05	2.13	1.66	1.34	
11,397.00	91.21	180.56	7,155.56	-3,342.47	640.53	3,343.02	0.99	0.50	-0.85	
11,492.00	88.39	179.60	7,155.89	-3,437.46	640.39	3,438.01	3.14	-2.97	-1.01	
11,586.00	88.39	179.71	7,158.54	-3,531.42	640.96	3,531.97	0.12	0.00	0.12	
11,681.00	88.72	179.03	7,160.93	-3,626.38	642.00	3,626.94	0.80	0.35	-0.72	
11,775.00	89.03	178.38	7,162.78	-3,720.34	644.13	3,720.90	0.77	0.33	-0.69	
11,870.00	89.30	178.16	7,164.16	-3,815.28	646.99	3,815.85	0.37	0.28	-0.23	

Company:	US ROCKIES WATTENBERG PLANNING	Local Co-ordinate Reference:	Well Cheese 38C-28HZ
Project:	WELD-NAD83-UTMFT13N	TVD Reference:	GL 4815 & KB 25 @ 4840.99usft (HP 307)
Site:	3N-65W-28 Cheese 1-28HZ Pad	MD Reference:	GL 4815 & KB 25 @ 4840.99usft (HP 307)
Well:	Cheese 38C-28HZ	North Reference:	True
Wellbore:	Plan A	Survey Calculation Method:	Minimum Curvature
Design:	Plan A	Database:	Denver Sales

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)
11,964.00	89.40	177.17	7,165.23	-3,909.20	650.82	3,909.76	1.06	0.11	-1.05
12,059.00	89.93	177.11	7,165.78	-4,004.08	655.56	4,004.65	0.56	0.56	-0.06
12,153.00	91.38	178.13	7,164.71	-4,097.99	659.47	4,098.56	1.89	1.54	1.09
12,248.00	90.80	178.87	7,162.90	-4,192.94	661.95	4,193.51	0.99	-0.61	0.78
12,342.00	89.87	180.66	7,162.35	-4,286.93	662.34	4,287.51	2.15	-0.99	1.90
12,437.00	90.77	180.44	7,161.82	-4,381.92	661.43	4,382.50	0.98	0.95	-0.23
12,531.00	89.36	179.73	7,161.71	-4,475.92	661.29	4,476.49	1.68	-1.50	-0.76
12,626.00	88.76	178.63	7,163.27	-4,570.89	662.65	4,571.47	1.32	-0.63	-1.16
12,720.00	89.63	178.21	7,164.59	-4,664.85	665.24	4,665.43	1.03	0.93	-0.45
12,804.00	90.57	177.98	7,164.45	-4,748.80	668.03	4,749.38	1.15	1.12	-0.27
LAST SDI MWD PRODUCTION SURVEY									
12,863.00	90.57	177.98	7,163.86	-4,807.76	670.11	4,808.34	0.00	0.00	0.00
SDI PROJECTION TO TD(52 FSL 122 FEL)									

Casing Points					
Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,121.00	1,115.26	9 5/8"	9.625	13.500	
7,300.00	7,043.88	TOP OF PRODUCTION(311 FSL 104 FEL)	0.000	7.875	

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
104.00	104.00	0.20	0.21	FIRST CATHEDRAL MWD SURFACE SURVEY
1,167.00	1,160.19	73.39	59.25	LAST CATHEDRAL MWD SURFACE SURVEY
1,287.00	1,276.75	97.65	74.21	FIRST SDI MWD PRODUCTION SURVEY
12,804.00	7,164.45	-4,748.80	668.03	LAST SDI MWD PRODUCTION SURVEY
12,863.00	7,163.86	-4,807.76	670.11	SDI PROJECTION TO TD(52 FSL 122 FEL)

Checked By: _____ Approved By: _____ Date: _____