

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**WELD\_CANNON 2 PAD**

**CANNON 13N-11HZ**

**CANNON 13N-11HZ**

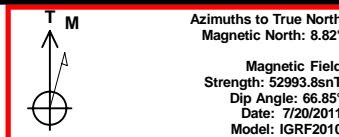
**Plan: CANNON 13N-11HZ (wp01)**

## **Standard Planning Report**

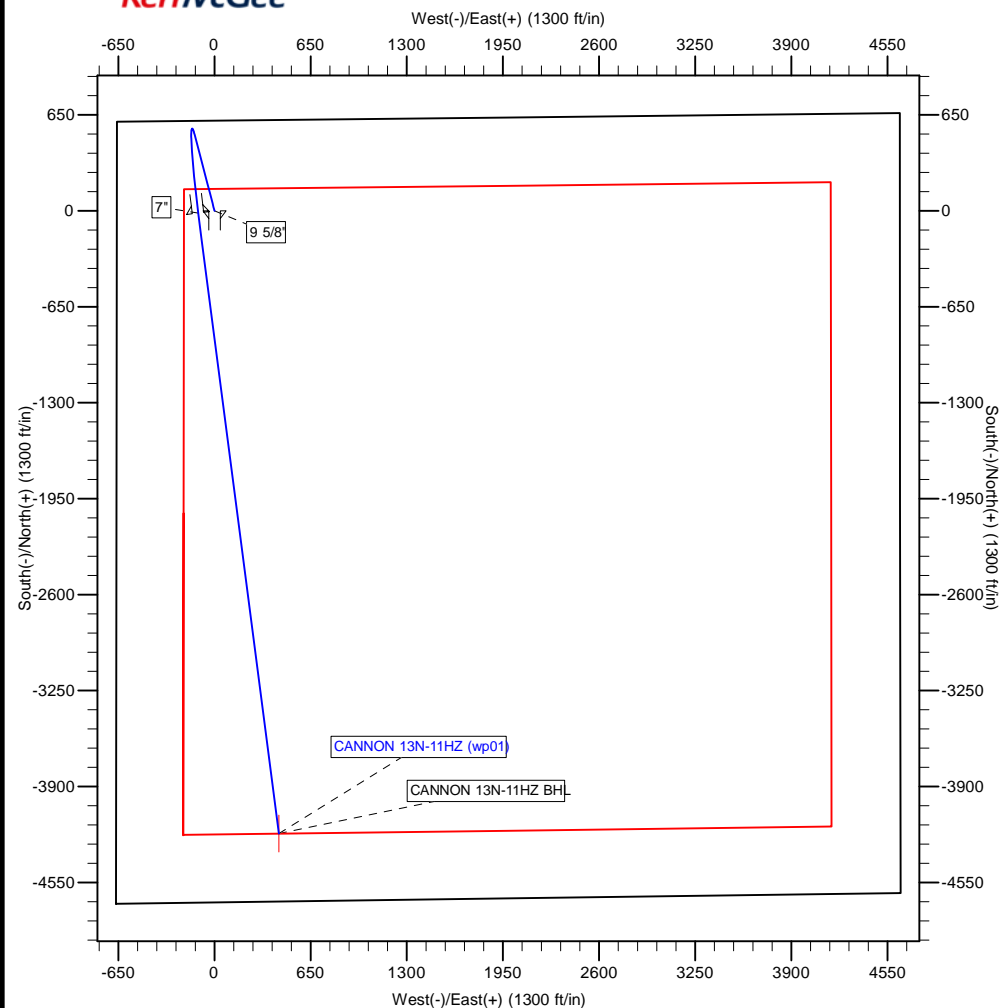
**20 July, 2011**



**Weatherford®**



Project: COLORADO NORTHERN ZONE - 83  
Site: WELD\_CANNON 2 PAD  
Well: CANNON 13N-11HZ  
Wellbore: CANNON 13N-11HZ  
Section:  
SHL:  
Design: CANNON 13N-11HZ (wp01)  
Latitude: 40.158321  
Longitude: -104.751435  
GL: 5042.00  
KB: 17' RKB + 5042' GL @ 5059.00ft



WELL DETAILS: CANNON 13N-11HZ						
+N/-S	+E/-W	Northing	Easting	Ground Level:	Latitude	Longitude
0.00	0.00	1301402.64	3209223.83	5042.00	40.158321	-104.751435

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
CANNON 13N-11HZ BHL	7309.00	-4218.71	435.26	40.146740	-104.749878	Point

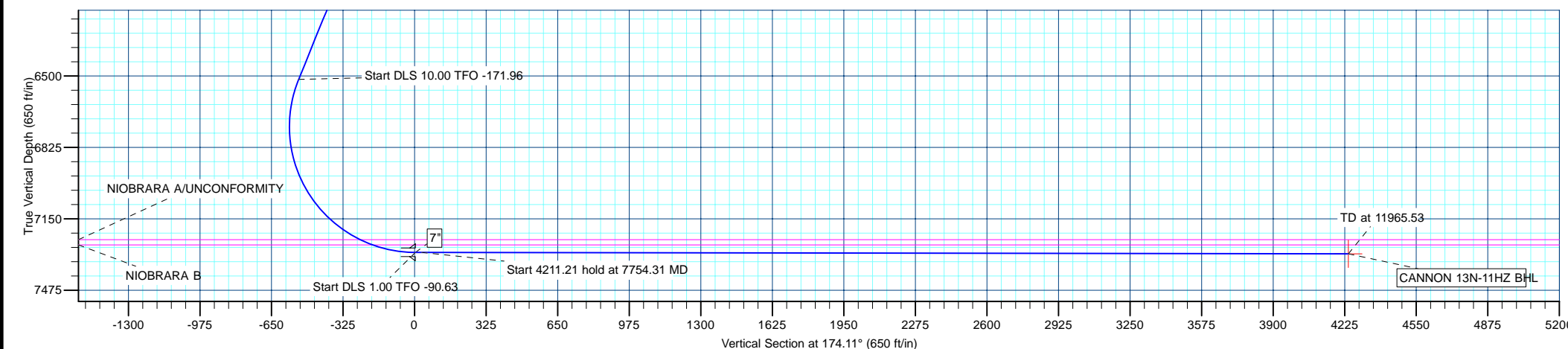
SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4650.00	0.00	0.00	4650.00	0.00	0.00	0.00	0.00	0.00	
5764.28	22.29	345.43	5736.40	207.11	-53.83	2.00	345.43	-211.54	
6606.50	22.29	345.43	6515.71	516.23	-134.17	0.00	0.00	-527.27	
7726.60	89.92	172.89	7303.00	-15.00	-110.00	10.00	-171.96	3.63	
7754.31	89.92	172.61	7303.04	-42.49	-106.50	1.00	-90.63	31.34	
11965.53	89.92	172.61	7309.00	-4218.71	435.26	0.00	0.00	4241.10	CANNON 13N-11HZ BHL

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
4223.00	4223.00	PARKMAN
4581.00	4581.00	SUSSEX
7245.00	7467.16	NIOBRARA A/UNCONFORMITY
7269.00	7528.86	NIOBRARA B

CASING DETAILS			
TVD	MD	Name	Size
900.00	900.00	9 5/8"	9-5/8
7303.00	7726.60	7"	7



Weatherford®



<b>Database:</b>	edm5000p	<b>Local Co-ordinate Reference:</b>	Well CANNON 13N-11HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	17' RKB + 5042' GL @ 5059.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	17' RKB + 5042' GL @ 5059.00ft
<b>Site:</b>	WELD_CANNON 2 PAD	<b>North Reference:</b>	True
<b>Well:</b>	CANNON 13N-11HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	CANNON 13N-11HZ		
<b>Design:</b>	CANNON 13N-11HZ (wp01)		

<b>Project</b>	COLORADO NORTHERN ZONE - 83		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

Site		WELD_CANNON 2 PAD			
Site Position:		Northing:	1,297,310.37 ft	Latitude:	40.146991
From:	Lat/Long	Easting:	3,213,348.62 ft	Longitude:	-104.736804
Position Uncertainty:	0.00 ft	Slot Radius:	0 "	Grid Convergence:	0.49

Well	CANNON 13N-11HZ					
Well Position	+N-S	4,127.62 ft	Northing:	1,301,402.64 ft	Latitude:	40.158321
	+E-W	-4,089.41 ft	Easting:	3,209,223.84 ft	Longitude:	-104.751435
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	5,042.00 ft

<b>Wellbore</b>	CANNON 13N-11HZ				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	7/20/2011	8.82	66.85	52,994

<b>Design</b>	CANNON 13N-11HZ (wp01)			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	174.11

<b>Plan Sections</b>										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4,650.00	0.00	0.00	4,650.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,764.28	22.29	345.43	5,736.40	207.11	-53.83	2.00	2.00	0.00	345.43	
6,606.50	22.29	345.43	6,515.71	516.23	-134.17	0.00	0.00	0.00	0.00	
7,726.60	89.92	172.89	7,303.00	-15.00	-110.00	10.00	6.04	-15.40	-171.96	
7,754.31	89.92	172.61	7,303.04	-42.49	-106.50	1.00	-0.01	-1.00	-90.63	
11,965.53	89.92	172.61	7,309.00	-4,218.71	435.26	0.00	0.00	0.00	0.00	CANNON 13N-11H

<b>Database:</b>	edm5000p	<b>Local Co-ordinate Reference:</b>	Well CANNON 13N-11HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	17' RKB + 5042' GL @ 5059.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	17' RKB + 5042' GL @ 5059.00ft
<b>Site:</b>	WELD_CANNON 2 PAD	<b>North Reference:</b>	True
<b>Well:</b>	CANNON 13N-11HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	CANNON 13N-11HZ		
<b>Design:</b>	CANNON 13N-11HZ (wp01)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
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
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	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,800.00	0.00	0.00	2,800.00	0.00	0.00	0.00	0.00	0.00	0.00
2,900.00	0.00	0.00	2,900.00	0.00	0.00	0.00	0.00	0.00	0.00
3,000.00	0.00	0.00	3,000.00	0.00	0.00	0.00	0.00	0.00	0.00
3,100.00	0.00	0.00	3,100.00	0.00	0.00	0.00	0.00	0.00	0.00
3,200.00	0.00	0.00	3,200.00	0.00	0.00	0.00	0.00	0.00	0.00
3,300.00	0.00	0.00	3,300.00	0.00	0.00	0.00	0.00	0.00	0.00
3,400.00	0.00	0.00	3,400.00	0.00	0.00	0.00	0.00	0.00	0.00
3,500.00	0.00	0.00	3,500.00	0.00	0.00	0.00	0.00	0.00	0.00
3,600.00	0.00	0.00	3,600.00	0.00	0.00	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,700.00	0.00	0.00	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,800.00	0.00	0.00	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,900.00	0.00	0.00	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	4,000.00	0.00	0.00	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,100.00	0.00	0.00	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,200.00	0.00	0.00	0.00	0.00	0.00	0.00
4,223.00	0.00	0.00	4,223.00	0.00	0.00	0.00	0.00	0.00	0.00
PARKMAN									
4,300.00	0.00	0.00	4,300.00	0.00	0.00	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,400.00	0.00	0.00	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,500.00	0.00	0.00	0.00	0.00	0.00	0.00
4,581.00	0.00	0.00	4,581.00	0.00	0.00	0.00	0.00	0.00	0.00
SUSSEX									
4,600.00	0.00	0.00	4,600.00	0.00	0.00	0.00	0.00	0.00	0.00
4,650.00	0.00	0.00	4,650.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									

<b>Database:</b>	edm5000p	<b>Local Co-ordinate Reference:</b>	Well CANNON 13N-11HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	17' RKB + 5042' GL @ 5059.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	17' RKB + 5042' GL @ 5059.00ft
<b>Site:</b>	WELD_CANNON 2 PAD	<b>North Reference:</b>	True
<b>Well:</b>	CANNON 13N-11HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	CANNON 13N-11HZ		
<b>Design:</b>	CANNON 13N-11HZ (wp01)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,700.00	1.00	345.43	4,700.00	0.42	-0.11	-0.43	2.00	2.00	0.00
4,800.00	3.00	345.43	4,799.93	3.80	-0.99	-3.88	2.00	2.00	0.00
4,900.00	5.00	345.43	4,899.68	10.55	-2.74	-10.78	2.00	2.00	0.00
5,000.00	7.00	345.43	4,999.13	20.67	-5.37	-21.11	2.00	2.00	0.00
5,100.00	9.00	345.43	5,098.15	34.14	-8.87	-34.87	2.00	2.00	0.00
5,200.00	11.00	345.43	5,196.63	50.94	-13.24	-52.03	2.00	2.00	0.00
5,300.00	13.00	345.43	5,294.44	71.06	-18.47	-72.58	2.00	2.00	0.00
5,400.00	15.00	345.43	5,391.46	94.48	-24.56	-96.50	2.00	2.00	0.00
5,500.00	17.00	345.43	5,487.58	121.15	-31.49	-123.74	2.00	2.00	0.00
5,600.00	19.00	345.43	5,582.68	151.06	-39.26	-154.29	2.00	2.00	0.00
5,700.00	21.00	345.43	5,676.65	184.16	-47.87	-188.10	2.00	2.00	0.00
5,764.28	22.29	345.43	5,736.40	207.11	-53.83	-211.54	2.00	2.00	0.00
Start 842.22 hold at 5764.28 MD									
5,800.00	22.29	345.43	5,769.45	220.21	-57.24	-224.93	0.00	0.00	0.00
5,900.00	22.29	345.43	5,861.98	256.92	-66.78	-262.41	0.00	0.00	0.00
6,000.00	22.29	345.43	5,954.51	293.62	-76.32	-299.90	0.00	0.00	0.00
6,100.00	22.29	345.43	6,047.04	330.32	-85.86	-337.39	0.00	0.00	0.00
6,200.00	22.29	345.43	6,139.57	367.03	-95.40	-374.88	0.00	0.00	0.00
6,300.00	22.29	345.43	6,232.10	403.73	-104.93	-412.37	0.00	0.00	0.00
6,400.00	22.29	345.43	6,324.63	440.43	-114.47	-449.86	0.00	0.00	0.00
6,500.00	22.29	345.43	6,417.16	477.14	-124.01	-487.34	0.00	0.00	0.00
6,600.00	22.29	345.43	6,509.69	513.84	-133.55	-524.83	0.00	0.00	0.00
6,606.50	22.29	345.43	6,515.71	516.23	-134.17	-527.27	0.00	0.00	0.00
Start DLS 10.00 TFO -171.96									
6,700.00	13.09	339.67	6,604.70	543.37	-142.33	-555.11	10.00	-9.83	-6.16
6,800.00	4.09	304.90	6,703.52	556.06	-149.21	-568.44	10.00	-9.00	-34.77
6,900.00	7.87	195.49	6,803.18	551.50	-153.98	-564.39	10.00	3.78	-109.41
7,000.00	17.52	182.57	6,900.63	529.81	-156.49	-543.07	10.00	9.65	-12.92
7,100.00	27.42	178.76	6,992.93	491.65	-156.67	-505.14	10.00	9.90	-3.81
7,200.00	37.37	176.87	7,077.27	438.20	-154.51	-451.74	10.00	9.95	-1.89
7,300.00	47.34	175.69	7,151.08	371.06	-150.08	-384.51	10.00	9.97	-1.18
7,400.00	57.31	174.84	7,212.12	292.29	-143.51	-305.47	10.00	9.98	-0.85
7,467.16	64.02	174.37	7,245.00	234.03	-137.99	-246.96	10.00	9.98	-0.70
NIOBRARA A/UNCONFORMITY									
7,500.00	67.30	174.16	7,258.53	204.27	-135.00	-217.04	10.00	9.98	-0.64
7,528.86	70.18	173.98	7,269.00	177.52	-132.22	-190.15	10.00	9.98	-0.61
NIOBRARA B									
7,600.00	77.28	173.57	7,288.92	109.68	-124.82	-121.91	10.00	9.98	-0.58
7,700.00	87.27	173.03	7,302.35	11.39	-113.26	-22.95	10.00	9.99	-0.54
7,726.60	89.92	172.89	7,303.00	-15.00	-110.00	3.63	10.00	9.98	-0.53
Start DLS 1.00 TFO -90.63 - 7"									
7,754.31	89.92	172.61	7,303.04	-42.49	-106.50	31.34	1.00	-0.01	-1.00
Start 4211.21 hold at 7754.31 MD									
7,800.00	89.92	172.61	7,303.10	-87.80	-100.62	77.01	0.00	0.00	0.00
7,900.00	89.92	172.61	7,303.24	-186.97	-87.76	176.98	0.00	0.00	0.00
8,000.00	89.92	172.61	7,303.39	-286.14	-74.89	276.94	0.00	0.00	0.00
8,100.00	89.92	172.61	7,303.53	-385.31	-62.03	376.91	0.00	0.00	0.00
8,200.00	89.92	172.61	7,303.67	-484.48	-49.16	476.87	0.00	0.00	0.00
8,300.00	89.92	172.61	7,303.81	-583.65	-36.30	576.84	0.00	0.00	0.00
8,400.00	89.92	172.61	7,303.95	-682.82	-23.43	676.80	0.00	0.00	0.00
8,500.00	89.92	172.61	7,304.09	-781.98	-10.57	776.77	0.00	0.00	0.00
8,600.00	89.92	172.61	7,304.24	-881.15	2.29	876.74	0.00	0.00	0.00
8,700.00	89.92	172.61	7,304.38	-980.32	15.16	976.70	0.00	0.00	0.00

<b>Database:</b>	edm5000p	<b>Local Co-ordinate Reference:</b>	Well CANNON 13N-11HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	17' RKB + 5042' GL @ 5059.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	17' RKB + 5042' GL @ 5059.00ft
<b>Site:</b>	WELD_CANNON 2 PAD	<b>North Reference:</b>	True
<b>Well:</b>	CANNON 13N-11HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	CANNON 13N-11HZ		
<b>Design:</b>	CANNON 13N-11HZ (wp01)		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
8,800.00	89.92	172.61	7,304.52	-1,079.49	28.02	1,076.67	0.00	0.00	0.00
8,900.00	89.92	172.61	7,304.66	-1,178.66	40.89	1,176.63	0.00	0.00	0.00
9,000.00	89.92	172.61	7,304.80	-1,277.83	53.75	1,276.60	0.00	0.00	0.00
9,100.00	89.92	172.61	7,304.94	-1,377.00	66.62	1,376.56	0.00	0.00	0.00
9,200.00	89.92	172.61	7,305.09	-1,476.17	79.48	1,476.53	0.00	0.00	0.00
9,300.00	89.92	172.61	7,305.23	-1,575.34	92.35	1,576.49	0.00	0.00	0.00
9,400.00	89.92	172.61	7,305.37	-1,674.50	105.21	1,676.46	0.00	0.00	0.00
9,500.00	89.92	172.61	7,305.51	-1,773.67	118.08	1,776.43	0.00	0.00	0.00
9,600.00	89.92	172.61	7,305.65	-1,872.84	130.94	1,876.39	0.00	0.00	0.00
9,700.00	89.92	172.61	7,305.79	-1,972.01	143.81	1,976.36	0.00	0.00	0.00
9,800.00	89.92	172.61	7,305.93	-2,071.18	156.67	2,076.32	0.00	0.00	0.00
9,900.00	89.92	172.61	7,306.08	-2,170.35	169.54	2,176.29	0.00	0.00	0.00
10,000.00	89.92	172.61	7,306.22	-2,269.52	182.40	2,276.25	0.00	0.00	0.00
10,100.00	89.92	172.61	7,306.36	-2,368.69	195.27	2,376.22	0.00	0.00	0.00
10,200.00	89.92	172.61	7,306.50	-2,467.86	208.13	2,476.19	0.00	0.00	0.00
10,300.00	89.92	172.61	7,306.64	-2,567.03	221.00	2,576.15	0.00	0.00	0.00
10,400.00	89.92	172.61	7,306.78	-2,666.19	233.86	2,676.12	0.00	0.00	0.00
10,500.00	89.92	172.61	7,306.93	-2,765.36	246.72	2,776.08	0.00	0.00	0.00
10,600.00	89.92	172.61	7,307.07	-2,864.53	259.59	2,876.05	0.00	0.00	0.00
10,700.00	89.92	172.61	7,307.21	-2,963.70	272.45	2,976.01	0.00	0.00	0.00
10,800.00	89.92	172.61	7,307.35	-3,062.87	285.32	3,075.98	0.00	0.00	0.00
10,900.00	89.92	172.61	7,307.49	-3,162.04	298.18	3,175.94	0.00	0.00	0.00
11,000.00	89.92	172.61	7,307.63	-3,261.21	311.05	3,275.91	0.00	0.00	0.00
11,100.00	89.92	172.61	7,307.77	-3,360.38	323.91	3,375.88	0.00	0.00	0.00
11,200.00	89.92	172.61	7,307.92	-3,459.55	336.78	3,475.84	0.00	0.00	0.00
11,300.00	89.92	172.61	7,308.06	-3,558.71	349.64	3,575.81	0.00	0.00	0.00
11,400.00	89.92	172.61	7,308.20	-3,657.88	362.51	3,675.77	0.00	0.00	0.00
11,500.00	89.92	172.61	7,308.34	-3,757.05	375.37	3,775.74	0.00	0.00	0.00
11,600.00	89.92	172.61	7,308.48	-3,856.22	388.24	3,875.70	0.00	0.00	0.00
11,700.00	89.92	172.61	7,308.62	-3,955.39	401.10	3,975.67	0.00	0.00	0.00
11,800.00	89.92	172.61	7,308.77	-4,054.56	413.97	4,075.63	0.00	0.00	0.00
11,900.00	89.92	172.61	7,308.91	-4,153.73	426.83	4,175.60	0.00	0.00	0.00
11,965.53	89.92	172.61	7,309.00	-4,218.71	435.26	4,241.10	0.00	0.00	0.00
TD at 11965.53 - CANNON 13N-11HZ BHL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
CANNON 13N-11HZ I	0.00	0.00	7,309.00	-4,218.71	435.26	1,297,187.75	3,209,694.69	40.146740	-104.749878
- hit/miss target									
- Shape									
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
900.00	900.00	9 5/8"	9-5/8	12-1/4	
7,726.60	7,303.00	7"	7	8-3/4	

<b>Database:</b>	edm5000p	<b>Local Co-ordinate Reference:</b>	Well CANNON 13N-11HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	17' RKB + 5042' GL @ 5059.00ft
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	17' RKB + 5042' GL @ 5059.00ft
<b>Site:</b>	WELD_CANNON 2 PAD	<b>North Reference:</b>	True
<b>Well:</b>	CANNON 13N-11HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	CANNON 13N-11HZ		
<b>Design:</b>	CANNON 13N-11HZ (wp01)		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,223.00	4,223.00	PARKMAN		0.00	
4,581.00	4,581.00	SUSSEX		0.00	
7,467.16	7,245.00	NIOBRARA A/UNCONFORMITY		0.00	
7,528.86	7,269.00	NIOBRARA B		0.00	

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
4,650.00	4,650.00	0.00	0.00	Start Build 2.00
5,764.28	5,736.40	207.11	-53.83	Start 842.22 hold at 5764.28 MD
6,606.50	6,515.71	516.23	-134.17	Start DLS 10.00 TFO -171.96
7,726.60	7,303.00	-15.00	-110.00	Start DLS 1.00 TFO -90.63
7,754.31	7,303.04	-42.49	-106.50	Start 4211.21 hold at 7754.31 MD
11,965.53	7,309.00	-4,218.71	435.26	TD at 11965.53