

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_BARCLAY 15-27 PAD

BARCLAY 28N-27HZ

BARCLAY 28N-27HZ

Plan: BARCLAY 28N-27HZ (wp01)

Standard Planning Report

26 July, 2011





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Azimuths to True North

Magnetic North: 8.83°

Magnetic Field

Strength: 53008.9nT

Dip Angle: 66.88°

Date: 7/25/2011

Model: IGRF2010

Project:

COLORADO NORTHERN ZONE - 83

Site:

WELD BARCLAY 15-27 PAD

Well:

BARCLAY 28N-27HZ

Wellbore:

BARCLAY 28N-27HZ

Section:

SHL:

Design:

BARCLAY 28N-27HZ (wp01)

Latitude:

40.190206

Longitude:

-104.760523

GL:

4956.00

KB:

17° RKB + 4956° GL @ 4973.00ft

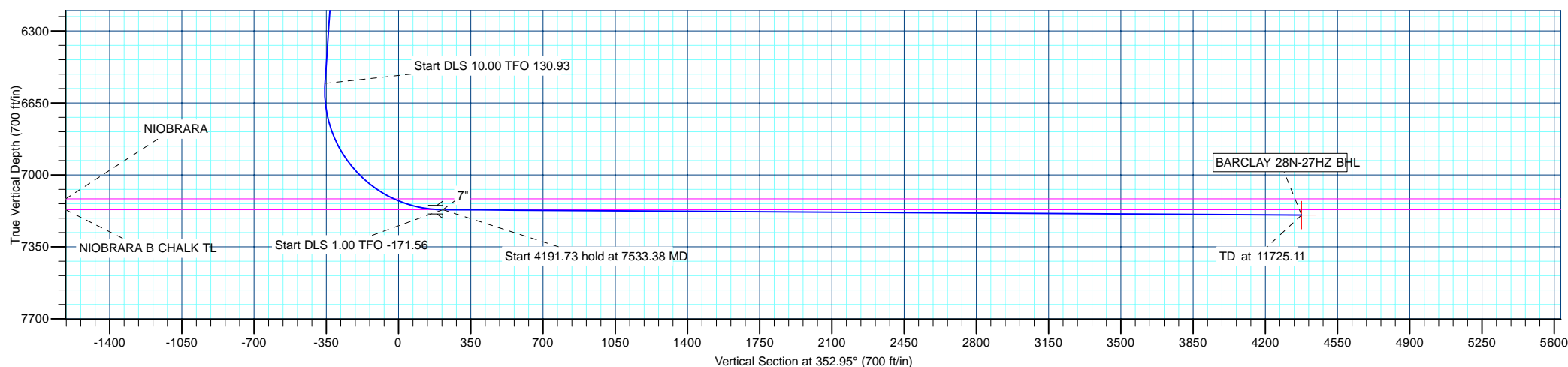
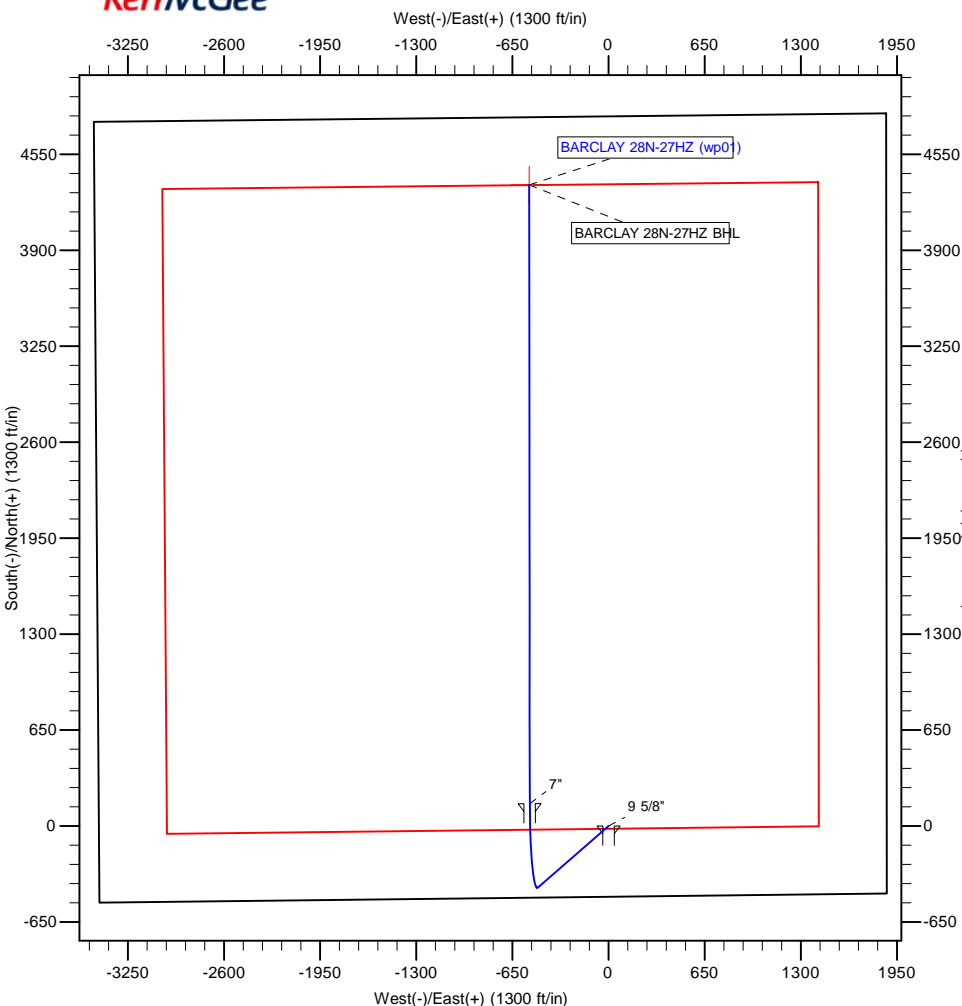
WELL DETAILS: BARCLAY 28N-27HZ						
+N/-S	+E/-W	Northing	Ground Level: Easting	4956.00 Latitude	40.190206 Longitude	Slot
0.00	0.00	1312996.03	3206586.94		-104.760523	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
BARCLAY 28N-27HZ BHL	7195.00	4343.02	-536.86	40.202128	-104.762445	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	
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00	
1336.21	6.72	228.86	1335.44	-12.97	-14.84	2.00	228.86	-11.05	
6591.27	6.72	228.86	6554.35	-417.81	-478.21	0.00	0.00	-355.98	
7532.00	89.66	359.95	7169.00	150.00	-533.00	10.00	130.93	214.26	
7533.38	89.64	359.95	7169.01	151.38	-533.00	1.00	-171.56	215.62	
11725.11	89.64	359.95	7195.00	4343.02	-536.86	0.00	0.00	4376.08	BARCLAY 28N-27HZ BHL

CASING DETAILS			
TVD	MD	Name	Size
850.00	850.00	9 5/8"	9-5/8
7169.00	7532.00	7"	7

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
2905.00	2916.64	SHARON SPRINGS
3213.00	3226.78	PARKMAN
4391.00	4412.93	SUSSEX
5033.00	5059.38	SHANNON
7116.00	7286.53	NIOBRARA
7169.00	7532.00	NIOBRARA B CHALK TL



Database:	edm5000p	Local Co-ordinate Reference:	Well BARCLAY 28N-27HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	17' RKB + 4956' GL @ 4973.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + 4956' GL @ 4973.00ft
Site:	WELD_BARCLAY 15-27 PAD	North Reference:	True
Well:	BARCLAY 28N-27HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	BARCLAY 28N-27HZ		
Design:	BARCLAY 28N-27HZ (wp01)		

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

Site						WELD_BARCLAY 15-27 PAD							
Site Position: From: Position Uncertainty:			Lat/Long 0.00 ft			Northing:		1,312,996.10 ft		Latitude:		40.190205	
						Easting:		3,206,634.99 ft		Longitude:		-104.760351	
						Slot Radius:		0 "		Grid Convergence:		0.48	

Well	BARCLAY 28N-27HZ					
Well Position	+N-S	0.33 ft	Northing:	1,312,996.03 ft	Latitude:	40.190206
	+E-W	-48.05 ft	Easting:	3,206,586.94 ft	Longitude:	-104.760523
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,956.00 ft

Wellbore	BARCLAY 28N-27HZ				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/25/2011	8.83	66.88	53,009

Design	BARCLAY 28N-27HZ (wp01)			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	352.95

Plan Sections										
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	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,336.21	6.72	228.86	1,335.44	-12.97	-14.84	2.00	2.00	0.00	228.86	
6,591.27	6.72	228.86	6,554.35	-417.81	-478.21	0.00	0.00	0.00	0.00	
7,532.00	89.66	359.95	7,169.00	150.00	-533.00	10.00	8.82	13.94	130.93	
7,533.38	89.64	359.95	7,169.01	151.38	-533.00	1.00	-0.99	-0.15	-171.56	
11,725.11	89.64	359.95	7,195.00	4,343.02	-536.86	0.00	0.00	0.00	0.00	BARCLAY 28N-27H

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Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + 4956' GL @ 4973.00ft
Site:	WELD_BARCLAY 15-27 PAD	North Reference:	True
Well:	BARCLAY 28N-27HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	BARCLAY 28N-27HZ		
Design:	BARCLAY 28N-27HZ (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
850.00	0.00	0.00	850.00	0.00	0.00	0.00	0.00	0.00	0.00
9 5/8"									
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
1,100.00	2.00	228.86	1,099.98	-1.15	-1.31	-0.98	2.00	2.00	0.00
1,200.00	4.00	228.86	1,199.84	-4.59	-5.26	-3.91	2.00	2.00	0.00
1,300.00	6.00	228.86	1,299.45	-10.33	-11.82	-8.80	2.00	2.00	0.00
1,336.21	6.72	228.86	1,335.44	-12.97	-14.84	-11.05	2.00	2.00	0.00
Start 5255.06 hold at 1336.21 MD									
1,400.00	6.72	228.86	1,398.79	-17.88	-20.46	-15.23	0.00	0.00	0.00
1,500.00	6.72	228.86	1,498.10	-25.58	-29.28	-21.80	0.00	0.00	0.00
1,600.00	6.72	228.86	1,597.41	-33.29	-38.10	-28.36	0.00	0.00	0.00
1,700.00	6.72	228.86	1,696.73	-40.99	-46.92	-34.93	0.00	0.00	0.00
1,800.00	6.72	228.86	1,796.04	-48.70	-55.73	-41.49	0.00	0.00	0.00
1,900.00	6.72	228.86	1,895.35	-56.40	-64.55	-48.05	0.00	0.00	0.00
2,000.00	6.72	228.86	1,994.66	-64.10	-73.37	-54.62	0.00	0.00	0.00
2,100.00	6.72	228.86	2,093.97	-71.81	-82.19	-61.18	0.00	0.00	0.00
2,200.00	6.72	228.86	2,193.29	-79.51	-91.01	-67.75	0.00	0.00	0.00
2,300.00	6.72	228.86	2,292.60	-87.21	-99.82	-74.31	0.00	0.00	0.00
2,400.00	6.72	228.86	2,391.91	-94.92	-108.64	-80.87	0.00	0.00	0.00
2,500.00	6.72	228.86	2,491.22	-102.62	-117.46	-87.44	0.00	0.00	0.00
2,600.00	6.72	228.86	2,590.54	-110.33	-126.28	-94.00	0.00	0.00	0.00
2,700.00	6.72	228.86	2,689.85	-118.03	-135.09	-100.56	0.00	0.00	0.00
2,800.00	6.72	228.86	2,789.16	-125.73	-143.91	-107.13	0.00	0.00	0.00
2,900.00	6.72	228.86	2,888.47	-133.44	-152.73	-113.69	0.00	0.00	0.00
2,916.64	6.72	228.86	2,905.00	-134.72	-154.20	-114.79	0.00	0.00	0.00
SHARON SPRINGS									
3,000.00	6.72	228.86	2,987.78	-141.14	-161.55	-120.26	0.00	0.00	0.00
3,100.00	6.72	228.86	3,087.10	-148.85	-170.36	-126.82	0.00	0.00	0.00
3,200.00	6.72	228.86	3,186.41	-156.55	-179.18	-133.38	0.00	0.00	0.00
3,226.78	6.72	228.86	3,213.00	-158.61	-181.54	-135.14	0.00	0.00	0.00
PARKMAN									
3,300.00	6.72	228.86	3,285.72	-164.25	-188.00	-139.95	0.00	0.00	0.00
3,400.00	6.72	228.86	3,385.03	-171.96	-196.82	-146.51	0.00	0.00	0.00
3,500.00	6.72	228.86	3,484.34	-179.66	-205.63	-153.08	0.00	0.00	0.00
3,600.00	6.72	228.86	3,583.66	-187.36	-214.45	-159.64	0.00	0.00	0.00
3,700.00	6.72	228.86	3,682.97	-195.07	-223.27	-166.20	0.00	0.00	0.00
3,800.00	6.72	228.86	3,782.28	-202.77	-232.09	-172.77	0.00	0.00	0.00
3,900.00	6.72	228.86	3,881.59	-210.48	-240.90	-179.33	0.00	0.00	0.00
4,000.00	6.72	228.86	3,980.91	-218.18	-249.72	-185.90	0.00	0.00	0.00
4,100.00	6.72	228.86	4,080.22	-225.88	-258.54	-192.46	0.00	0.00	0.00
4,200.00	6.72	228.86	4,179.53	-233.59	-267.36	-199.02	0.00	0.00	0.00
4,300.00	6.72	228.86	4,278.84	-241.29	-276.17	-205.59	0.00	0.00	0.00
4,400.00	6.72	228.86	4,378.15	-249.00	-284.99	-212.15	0.00	0.00	0.00

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Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + 4956' GL @ 4973.00ft
Site:	WELD_BARCLAY 15-27 PAD	North Reference:	True
Well:	BARCLAY 28N-27HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	BARCLAY 28N-27HZ		
Design:	BARCLAY 28N-27HZ (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)
4,412.93	6.72	228.86	4,391.00	-249.99	-286.13	-213.00	0.00	0.00	0.00
SUSSEX									
4,500.00	6.72	228.86	4,477.47	-256.70	-293.81	-218.72	0.00	0.00	0.00
4,600.00	6.72	228.86	4,576.78	-264.40	-302.63	-225.28	0.00	0.00	0.00
4,700.00	6.72	228.86	4,676.09	-272.11	-311.44	-231.84	0.00	0.00	0.00
4,800.00	6.72	228.86	4,775.40	-279.81	-320.26	-238.41	0.00	0.00	0.00
4,900.00	6.72	228.86	4,874.71	-287.51	-329.08	-244.97	0.00	0.00	0.00
5,000.00	6.72	228.86	4,974.03	-295.22	-337.90	-251.53	0.00	0.00	0.00
5,059.38	6.72	228.86	5,033.00	-299.79	-343.13	-255.43	0.00	0.00	0.00
SHANNON									
5,100.00	6.72	228.86	5,073.34	-302.92	-346.71	-258.10	0.00	0.00	0.00
5,200.00	6.72	228.86	5,172.65	-310.63	-355.53	-264.66	0.00	0.00	0.00
5,300.00	6.72	228.86	5,271.96	-318.33	-364.35	-271.23	0.00	0.00	0.00
5,400.00	6.72	228.86	5,371.28	-326.03	-373.17	-277.79	0.00	0.00	0.00
5,500.00	6.72	228.86	5,470.59	-333.74	-381.99	-284.35	0.00	0.00	0.00
5,600.00	6.72	228.86	5,569.90	-341.44	-390.80	-290.92	0.00	0.00	0.00
5,700.00	6.72	228.86	5,669.21	-349.14	-399.62	-297.48	0.00	0.00	0.00
5,800.00	6.72	228.86	5,768.52	-356.85	-408.44	-304.05	0.00	0.00	0.00
5,900.00	6.72	228.86	5,867.84	-364.55	-417.26	-310.61	0.00	0.00	0.00
6,000.00	6.72	228.86	5,967.15	-372.26	-426.07	-317.17	0.00	0.00	0.00
6,100.00	6.72	228.86	6,066.46	-379.96	-434.89	-323.74	0.00	0.00	0.00
6,200.00	6.72	228.86	6,165.77	-387.66	-443.71	-330.30	0.00	0.00	0.00
6,300.00	6.72	228.86	6,265.08	-395.37	-452.53	-336.87	0.00	0.00	0.00
6,400.00	6.72	228.86	6,364.40	-403.07	-461.34	-343.43	0.00	0.00	0.00
6,500.00	6.72	228.86	6,463.71	-410.78	-470.16	-349.99	0.00	0.00	0.00
6,591.27	6.72	228.86	6,554.35	-417.81	-478.21	-355.98	0.00	0.00	0.00
Start DLS 10.00 TFO 130.93									
6,600.00	6.19	234.99	6,563.03	-418.41	-478.98	-356.49	10.00	-6.15	70.23
6,700.00	8.21	321.96	6,662.48	-415.88	-487.81	-352.89	10.00	2.02	86.98
6,800.00	17.20	343.31	6,759.97	-396.04	-496.48	-332.14	10.00	8.99	21.34
6,900.00	26.90	349.90	6,852.56	-359.51	-504.71	-294.88	10.00	9.70	6.59
7,000.00	36.76	353.15	6,937.42	-307.40	-512.27	-242.23	10.00	9.86	3.25
7,100.00	46.67	355.17	7,011.98	-241.28	-518.92	-175.79	10.00	9.91	2.02
7,200.00	56.61	356.62	7,073.97	-163.17	-524.45	-97.59	10.00	9.94	1.45
7,286.53	65.21	357.63	7,116.00	-87.72	-528.21	-22.25	10.00	9.95	1.16
NIOBRARA									
7,300.00	66.55	357.77	7,121.50	-75.43	-528.70	-10.00	10.00	9.95	1.06
7,400.00	76.51	358.76	7,153.14	19.25	-531.54	84.32	10.00	9.96	0.99
7,500.00	86.47	359.67	7,167.92	118.02	-532.89	182.50	10.00	9.96	0.91
7,532.00	89.66	359.95	7,169.00	150.00	-533.00	214.26	10.00	9.96	0.89
Start DLS 1.00 TFO -171.56 - NIOBRARA B CHALK TL - 7"									
7,533.38	89.64	359.95	7,169.01	151.38	-533.00	215.62	1.00	-0.99	-0.15
Start 4191.73 hold at 7533.38 MD									
7,600.00	89.64	359.95	7,169.42	217.99	-533.06	281.74	0.00	0.00	0.00
7,700.00	89.64	359.95	7,170.04	317.99	-533.15	381.00	0.00	0.00	0.00
7,800.00	89.64	359.95	7,170.66	417.99	-533.25	480.25	0.00	0.00	0.00
7,900.00	89.64	359.95	7,171.28	517.99	-533.34	579.51	0.00	0.00	0.00
8,000.00	89.64	359.95	7,171.90	617.99	-533.43	678.76	0.00	0.00	0.00
8,100.00	89.64	359.95	7,172.52	717.98	-533.52	778.01	0.00	0.00	0.00
8,200.00	89.64	359.95	7,173.14	817.98	-533.61	877.27	0.00	0.00	0.00
8,300.00	89.64	359.95	7,173.76	917.98	-533.71	976.52	0.00	0.00	0.00
8,400.00	89.64	359.95	7,174.38	1,017.98	-533.80	1,075.78	0.00	0.00	0.00
8,500.00	89.64	359.95	7,175.00	1,117.98	-533.89	1,175.03	0.00	0.00	0.00

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Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + 4956' GL @ 4973.00ft
Site:	WELD_BARCLAY 15-27 PAD	North Reference:	True
Well:	BARCLAY 28N-27HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	BARCLAY 28N-27HZ		
Design:	BARCLAY 28N-27HZ (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)
8,600.00	89.64	359.95	7,175.62	1,217.97	-533.98	1,274.28	0.00	0.00	0.00
8,700.00	89.64	359.95	7,176.24	1,317.97	-534.08	1,373.54	0.00	0.00	0.00
8,800.00	89.64	359.95	7,176.86	1,417.97	-534.17	1,472.79	0.00	0.00	0.00
8,900.00	89.64	359.95	7,177.48	1,517.97	-534.26	1,572.05	0.00	0.00	0.00
9,000.00	89.64	359.95	7,178.10	1,617.97	-534.35	1,671.30	0.00	0.00	0.00
9,100.00	89.64	359.95	7,178.72	1,717.97	-534.44	1,770.55	0.00	0.00	0.00
9,200.00	89.64	359.95	7,179.34	1,817.96	-534.54	1,869.81	0.00	0.00	0.00
9,300.00	89.64	359.95	7,179.96	1,917.96	-534.63	1,969.06	0.00	0.00	0.00
9,400.00	89.64	359.95	7,180.58	2,017.96	-534.72	2,068.32	0.00	0.00	0.00
9,500.00	89.64	359.95	7,181.20	2,117.96	-534.81	2,167.57	0.00	0.00	0.00
9,600.00	89.64	359.95	7,181.82	2,217.96	-534.90	2,266.82	0.00	0.00	0.00
9,700.00	89.64	359.95	7,182.44	2,317.95	-535.00	2,366.08	0.00	0.00	0.00
9,800.00	89.64	359.95	7,183.06	2,417.95	-535.09	2,465.33	0.00	0.00	0.00
9,900.00	89.64	359.95	7,183.68	2,517.95	-535.18	2,564.59	0.00	0.00	0.00
10,000.00	89.64	359.95	7,184.30	2,617.95	-535.27	2,663.84	0.00	0.00	0.00
10,100.00	89.64	359.95	7,184.92	2,717.95	-535.36	2,763.09	0.00	0.00	0.00
10,200.00	89.64	359.95	7,185.54	2,817.94	-535.46	2,862.35	0.00	0.00	0.00
10,300.00	89.64	359.95	7,186.16	2,917.94	-535.55	2,961.60	0.00	0.00	0.00
10,400.00	89.64	359.95	7,186.78	3,017.94	-535.64	3,060.86	0.00	0.00	0.00
10,500.00	89.64	359.95	7,187.40	3,117.94	-535.73	3,160.11	0.00	0.00	0.00
10,600.00	89.64	359.95	7,188.02	3,217.94	-535.82	3,259.36	0.00	0.00	0.00
10,700.00	89.64	359.95	7,188.64	3,317.93	-535.92	3,358.62	0.00	0.00	0.00
10,800.00	89.64	359.95	7,189.26	3,417.93	-536.01	3,457.87	0.00	0.00	0.00
10,900.00	89.64	359.95	7,189.88	3,517.93	-536.10	3,557.13	0.00	0.00	0.00
11,000.00	89.64	359.95	7,190.50	3,617.93	-536.19	3,656.38	0.00	0.00	0.00
11,100.00	89.64	359.95	7,191.12	3,717.93	-536.28	3,755.63	0.00	0.00	0.00
11,200.00	89.64	359.95	7,191.74	3,817.92	-536.38	3,854.89	0.00	0.00	0.00
11,300.00	89.64	359.95	7,192.36	3,917.92	-536.47	3,954.14	0.00	0.00	0.00
11,400.00	89.64	359.95	7,192.98	4,017.92	-536.56	4,053.39	0.00	0.00	0.00
11,500.00	89.64	359.95	7,193.60	4,117.92	-536.65	4,152.65	0.00	0.00	0.00
11,600.00	89.64	359.95	7,194.22	4,217.92	-536.74	4,251.90	0.00	0.00	0.00
11,700.00	89.64	359.95	7,194.84	4,317.91	-536.84	4,351.16	0.00	0.00	0.00
11,725.11	89.64	359.95	7,195.00	4,343.02	-536.86	4,376.08	0.00	0.00	0.00
TD at 11725.11 - BARCLAY 28N-27HZ BHL									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
BARCLAY 28N-27HZ	0.00	0.00	7,195.00	4,343.02	-536.86	1,317,334.42	3,206,013.88	40.202128	-104.762445
- hit/miss target									
- Shape									
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
850.00	850.00	9 5/8"	9-5/8	12-1/4	
7,532.00	7,169.00	7"	7	8-3/4	

Database:	edm5000p	Local Co-ordinate Reference:	Well BARCLAY 28N-27HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	17' RKB + 4956' GL @ 4973.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + 4956' GL @ 4973.00ft
Site:	WELD_BARCLAY 15-27 PAD	North Reference:	True
Well:	BARCLAY 28N-27HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	BARCLAY 28N-27HZ		
Design:	BARCLAY 28N-27HZ (wp01)		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
2,916.64	2,905.00	SHARON SPRINGS		0.00		
3,226.78	3,213.00	PARKMAN		0.00		
4,412.93	4,391.00	SUSSEX		0.00		
5,059.38	5,033.00	SHANNON		0.00		
7,286.53	7,116.00	NIOBRARA		0.00		
7,532.00	7,169.00	NIOBRARA B CHALK TL		0.00		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,000.00	1,000.00	0.00	0.00	Start Build 2.00	
1,336.21	1,335.44	-12.97	-14.84	Start 5255.06 hold at 1336.21 MD	
6,591.27	6,554.35	-417.81	-478.21	Start DLS 10.00 TFO 130.93	
7,532.00	7,169.00	150.00	-533.00	Start DLS 1.00 TFO -171.56	
7,533.38	7,169.01	151.38	-533.00	Start 4191.73 hold at 7533.38 MD	
11,725.11	7,195.00	4,343.02	-536.86	TD at 11725.11	