

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

WELD_BARCLAY 14-27 PAD

BARCLAY 3N-27HZ

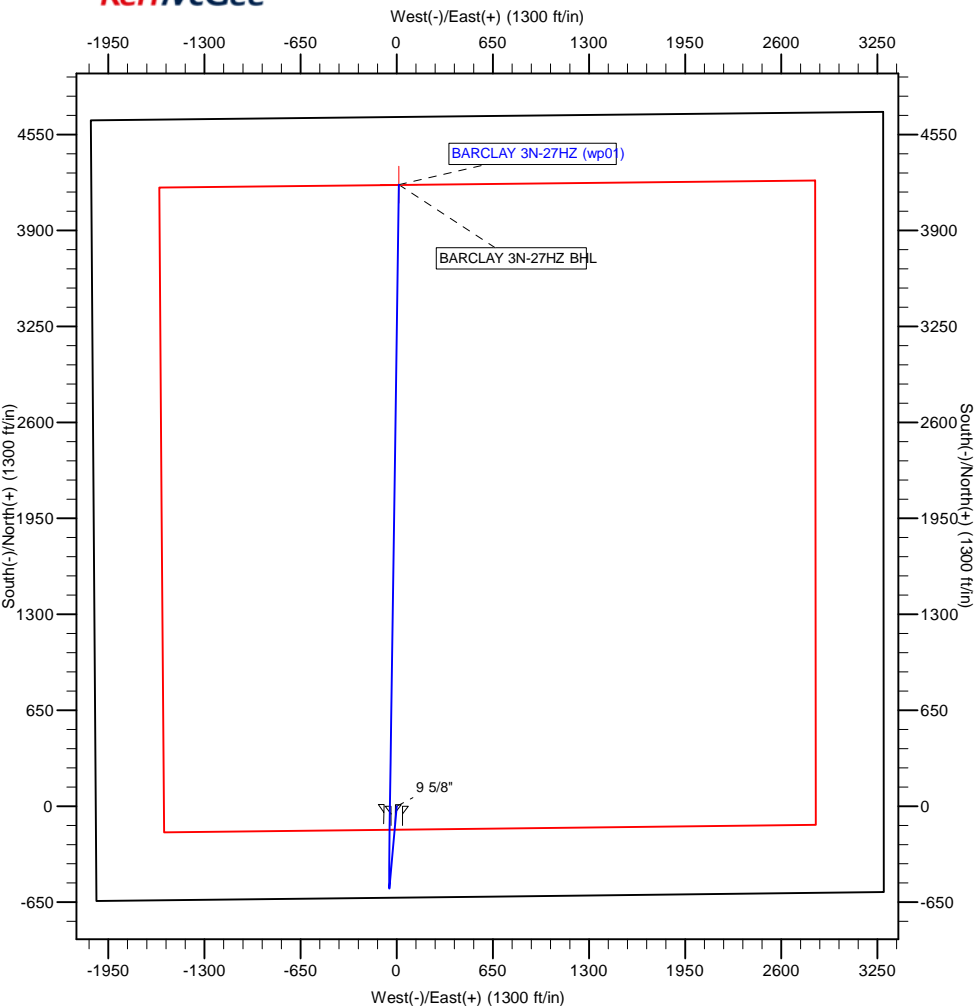
BARCLAY 3N-27HZ

Plan: BARCLAY 3N-27HZ (wp01)

Standard Planning Report

26 July, 2011





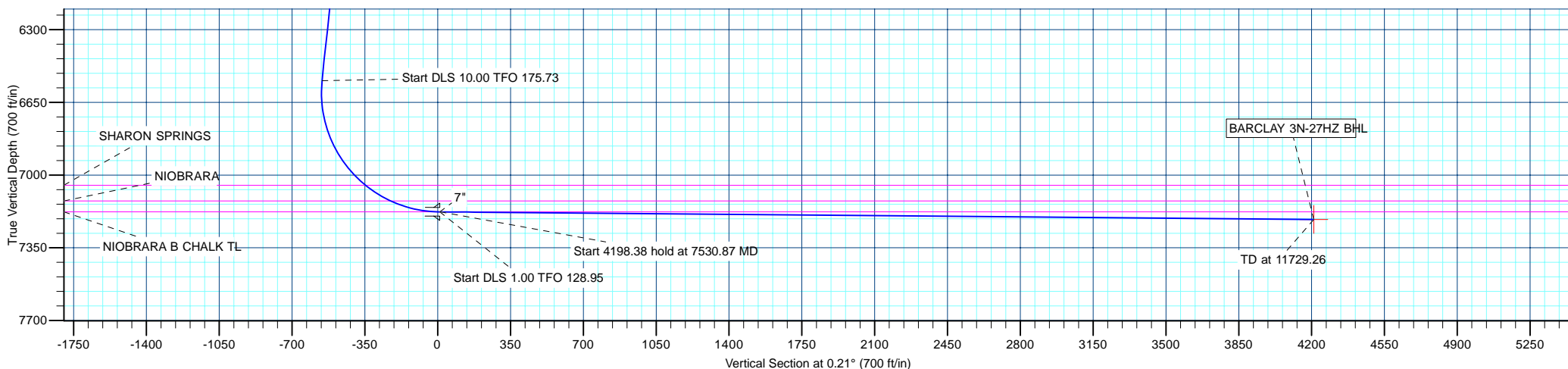
WELL DETAILS: BARCLAY 3N-27HZ						
+N/-S	+E/-W	Northing	Ground Level: Easting	4959.00 Latitude	Longitude	Slot
0.00	0.00	1313107.44	3205173.46	40.190544	-104.765579	

WELLBORE TARGET DETAILS (MAP CO-ORDINATES AND LAT/LONG)						
Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
BARCLAY 3N-27HZ BHL	7213.00	4210.75	15.08	40.202103	-104.765525	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	
1294.79	5.90	185.06	1294.27	-15.09	-1.34	2.00	185.06	-15.10	
6573.83	5.90	185.06	6545.39	-555.23	-49.19	0.00	0.00	-555.41	
7527.90	89.53	0.81	7177.00	10.00	-46.00	10.00	175.73	9.84	
7530.87	89.51	0.83	7177.02	12.97	-45.96	1.00	128.95	12.80	
11729.26	89.51	0.83	7213.00	4210.75	15.08	0.00	0.00	4210.78	BARCLAY 3N-27HZ BHL

FORMATION TOP DETAILS		
TVDPath	MDPath	Formation
3221.00	3231.77	PARKMAN
4399.00	4416.03	SUSSEX
5041.00	5061.44	SHANNON
7049.00	7142.09	SHARON SPRINGS
7124.00	7284.19	NIOBRARA
7177.00	7527.90	NIOBRARA B CHALK TL

CASING DETAILS			
TVD	MD	Name	Size
850.00	850.00	9 5/8"	9-5/8
7177.00	7527.90	7"	7



Database:	edm5000p	Local Co-ordinate Reference:	Well BARCLAY 3N-27HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	17' RKB + 4959' GL @ 4976.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + 4959' GL @ 4976.00ft
Site:	WELD_BARCLAY 14-27 PAD	North Reference:	True
Well:	BARCLAY 3N-27HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	BARCLAY 3N-27HZ		
Design:	BARCLAY 3N-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 14-27 PAD											
Site Position:			Northing:			1,313,107.45 ft			Latitude:			40.190544					
From:			Lat/Long			Easting:			3,205,173.46 ft			Longitude:			-104.765579		
Position Uncertainty:			0.00 ft			Slot Radius:			0 "			Grid Convergence:			0.47 °		

Well	BARCLAY 3N-27HZ					
Well Position	+N-S	-0.01 ft	Northing:	1,313,107.44 ft	Latitude:	40.190544
	+E-W	0.00 ft	Easting:	3,205,173.46 ft	Longitude:	-104.765579
Position Uncertainty		0.00 ft	Wellhead Elevation:		Ground Level:	4,959.00 ft

Wellbore	BARCLAY 3N-27HZ				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	7/21/2011	8.83	66.88	53,010

Design	BARCLAY 3N-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	0.21

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	
1,294.79	5.90	185.06	1,294.27	-15.09	-1.34	2.00	2.00	0.00	185.06	
6,573.83	5.90	185.06	6,545.39	-555.23	-49.19	0.00	0.00	0.00	0.00	
7,527.90	89.53	0.81	7,177.00	10.00	-46.00	10.00	8.77	18.42	175.73	
7,530.87	89.51	0.83	7,177.03	12.97	-45.96	1.00	-0.63	0.78	128.95	
11,729.26	89.51	0.83	7,213.00	4,210.76	15.08	0.00	0.00	0.00	0.00	BARCLAY 3N-27HZ

Database:	edm5000p	Local Co-ordinate Reference:	Well BARCLAY 3N-27HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	17' RKB + 4959' GL @ 4976.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + 4959' GL @ 4976.00ft
Site:	WELD_BARCLAY 14-27 PAD	North Reference:	True
Well:	BARCLAY 3N-27HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	BARCLAY 3N-27HZ		
Design:	BARCLAY 3N-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	185.06	1,099.98	-1.74	-0.15	-1.74	2.00	2.00	0.00
1,200.00	4.00	185.06	1,199.84	-6.95	-0.62	-6.95	2.00	2.00	0.00
1,294.79	5.90	185.06	1,294.27	-15.09	-1.34	-15.10	2.00	2.00	0.00
Start 5279.05 hold at 1294.79 MD									
1,300.00	5.90	185.06	1,299.45	-15.63	-1.38	-15.63	0.00	0.00	0.00
1,400.00	5.90	185.06	1,398.92	-25.86	-2.29	-25.87	0.00	0.00	0.00
1,500.00	5.90	185.06	1,498.39	-36.09	-3.20	-36.10	0.00	0.00	0.00
1,600.00	5.90	185.06	1,597.87	-46.32	-4.10	-46.34	0.00	0.00	0.00
1,700.00	5.90	185.06	1,697.34	-56.55	-5.01	-56.57	0.00	0.00	0.00
1,800.00	5.90	185.06	1,796.81	-66.79	-5.92	-66.81	0.00	0.00	0.00
1,900.00	5.90	185.06	1,896.28	-77.02	-6.82	-77.04	0.00	0.00	0.00
2,000.00	5.90	185.06	1,995.75	-87.25	-7.73	-87.28	0.00	0.00	0.00
2,100.00	5.90	185.06	2,095.22	-97.48	-8.64	-97.51	0.00	0.00	0.00
2,200.00	5.90	185.06	2,194.69	-107.71	-9.54	-107.75	0.00	0.00	0.00
2,300.00	5.90	185.06	2,294.16	-117.95	-10.45	-117.98	0.00	0.00	0.00
2,400.00	5.90	185.06	2,393.63	-128.18	-11.36	-128.22	0.00	0.00	0.00
2,500.00	5.90	185.06	2,493.11	-138.41	-12.26	-138.45	0.00	0.00	0.00
2,600.00	5.90	185.06	2,592.58	-148.64	-13.17	-148.69	0.00	0.00	0.00
2,700.00	5.90	185.06	2,692.05	-158.87	-14.08	-158.92	0.00	0.00	0.00
2,800.00	5.90	185.06	2,791.52	-169.10	-14.98	-169.16	0.00	0.00	0.00
2,900.00	5.90	185.06	2,890.99	-179.34	-15.89	-179.39	0.00	0.00	0.00
3,000.00	5.90	185.06	2,990.46	-189.57	-16.80	-189.63	0.00	0.00	0.00
3,100.00	5.90	185.06	3,089.93	-199.80	-17.70	-199.86	0.00	0.00	0.00
3,200.00	5.90	185.06	3,189.40	-210.03	-18.61	-210.10	0.00	0.00	0.00
3,231.77	5.90	185.06	3,221.00	-213.28	-18.90	-213.35	0.00	0.00	0.00
PARKMAN									
3,300.00	5.90	185.06	3,288.87	-220.26	-19.52	-220.33	0.00	0.00	0.00
3,400.00	5.90	185.06	3,388.34	-230.49	-20.42	-230.57	0.00	0.00	0.00
3,500.00	5.90	185.06	3,487.82	-240.73	-21.33	-240.80	0.00	0.00	0.00
3,600.00	5.90	185.06	3,587.29	-250.96	-22.23	-251.04	0.00	0.00	0.00
3,700.00	5.90	185.06	3,686.76	-261.19	-23.14	-261.27	0.00	0.00	0.00
3,800.00	5.90	185.06	3,786.23	-271.42	-24.05	-271.51	0.00	0.00	0.00
3,900.00	5.90	185.06	3,885.70	-281.65	-24.95	-281.74	0.00	0.00	0.00
4,000.00	5.90	185.06	3,985.17	-291.88	-25.86	-291.98	0.00	0.00	0.00
4,100.00	5.90	185.06	4,084.64	-302.12	-26.77	-302.21	0.00	0.00	0.00
4,200.00	5.90	185.06	4,184.11	-312.35	-27.67	-312.45	0.00	0.00	0.00
4,300.00	5.90	185.06	4,283.58	-322.58	-28.58	-322.68	0.00	0.00	0.00
4,400.00	5.90	185.06	4,383.06	-332.81	-29.49	-332.92	0.00	0.00	0.00
4,416.03	5.90	185.06	4,399.00	-334.45	-29.63	-334.56	0.00	0.00	0.00
SUSSEX									

Database:	edm5000p	Local Co-ordinate Reference:	Well BARCLAY 3N-27HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	17' RKB + 4959' GL @ 4976.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + 4959' GL @ 4976.00ft
Site:	WELD_BARCLAY 14-27 PAD	North Reference:	True
Well:	BARCLAY 3N-27HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	BARCLAY 3N-27HZ		
Design:	BARCLAY 3N-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)
4,500.00	5.90	185.06	4,482.53	-343.04	-30.39	-343.15	0.00	0.00	0.00
4,600.00	5.90	185.06	4,582.00	-353.28	-31.30	-353.38	0.00	0.00	0.00
4,700.00	5.90	185.06	4,681.47	-363.51	-32.21	-363.62	0.00	0.00	0.00
4,800.00	5.90	185.06	4,780.94	-373.74	-33.11	-373.85	0.00	0.00	0.00
4,900.00	5.90	185.06	4,880.41	-383.97	-34.02	-384.09	0.00	0.00	0.00
5,000.00	5.90	185.06	4,979.88	-394.20	-34.93	-394.32	0.00	0.00	0.00
5,061.44	5.90	185.06	5,041.00	-400.49	-35.48	-400.61	0.00	0.00	0.00
SHANNON									
5,100.00	5.90	185.06	5,079.35	-404.43	-35.83	-404.56	0.00	0.00	0.00
5,200.00	5.90	185.06	5,178.82	-414.67	-36.74	-414.79	0.00	0.00	0.00
5,300.00	5.90	185.06	5,278.29	-424.90	-37.65	-425.03	0.00	0.00	0.00
5,400.00	5.90	185.06	5,377.77	-435.13	-38.55	-435.26	0.00	0.00	0.00
5,500.00	5.90	185.06	5,477.24	-445.36	-39.46	-445.50	0.00	0.00	0.00
5,600.00	5.90	185.06	5,576.71	-455.59	-40.37	-455.73	0.00	0.00	0.00
5,700.00	5.90	185.06	5,676.18	-465.82	-41.27	-465.97	0.00	0.00	0.00
5,800.00	5.90	185.06	5,775.65	-476.06	-42.18	-476.20	0.00	0.00	0.00
5,900.00	5.90	185.06	5,875.12	-486.29	-43.08	-486.44	0.00	0.00	0.00
6,000.00	5.90	185.06	5,974.59	-496.52	-43.99	-496.67	0.00	0.00	0.00
6,100.00	5.90	185.06	6,074.06	-506.75	-44.90	-506.91	0.00	0.00	0.00
6,200.00	5.90	185.06	6,173.53	-516.98	-45.80	-517.14	0.00	0.00	0.00
6,300.00	5.90	185.06	6,273.01	-527.21	-46.71	-527.38	0.00	0.00	0.00
6,400.00	5.90	185.06	6,372.48	-537.45	-47.62	-537.61	0.00	0.00	0.00
6,500.00	5.90	185.06	6,471.95	-547.68	-48.52	-547.85	0.00	0.00	0.00
6,573.83	5.90	185.06	6,545.39	-555.23	-49.19	-555.41	0.00	0.00	0.00
Start DLS 10.00 TFO 175.73									
6,600.00	3.29	188.46	6,571.47	-557.31	-49.42	-557.49	10.00	-9.95	12.98
6,700.00	6.75	357.11	6,671.29	-554.28	-50.14	-554.45	10.00	3.46	168.65
6,800.00	16.74	359.36	6,769.08	-533.95	-50.60	-534.13	10.00	9.99	2.25
6,900.00	26.74	359.94	6,861.85	-496.96	-50.79	-497.14	10.00	10.00	0.59
7,000.00	36.74	0.23	6,946.78	-444.42	-50.69	-444.60	10.00	10.00	0.28
7,100.00	46.74	0.40	7,021.31	-377.93	-50.32	-378.11	10.00	10.00	0.17
7,142.09	50.95	0.46	7,049.00	-346.25	-50.08	-346.42	10.00	10.00	0.14
SHARON SPRINGS									
7,200.00	56.74	0.53	7,083.15	-299.51	-49.68	-299.69	10.00	10.00	0.12
7,284.19	65.16	0.61	7,124.00	-225.98	-48.95	-226.15	10.00	10.00	0.10
NIOBRARA									
7,300.00	66.74	0.63	7,130.44	-211.55	-48.79	-211.72	10.00	10.00	0.09
7,400.00	76.74	0.71	7,161.74	-116.71	-47.68	-116.88	10.00	10.00	0.09
7,500.00	86.74	0.79	7,176.09	-17.88	-46.39	-18.05	10.00	10.00	0.08
7,527.90	89.53	0.81	7,177.00	10.00	-46.00	9.83	10.00	10.00	0.08
Start DLS 1.00 TFO 128.95 - NIOBRARA B CHALK TL - 7"									
7,530.87	89.51	0.83	7,177.03	12.97	-45.96	12.80	1.00	-0.63	0.78
Start 4198.38 hold at 7530.87 MD									
7,600.00	89.51	0.83	7,177.62	82.09	-44.95	81.92	0.00	0.00	0.00
7,700.00	89.51	0.83	7,178.47	182.07	-43.50	181.91	0.00	0.00	0.00
7,800.00	89.51	0.83	7,179.33	282.06	-42.04	281.91	0.00	0.00	0.00
7,900.00	89.51	0.83	7,180.19	382.04	-40.59	381.90	0.00	0.00	0.00
8,000.00	89.51	0.83	7,181.04	482.03	-39.14	481.89	0.00	0.00	0.00
8,100.00	89.51	0.83	7,181.90	582.01	-37.68	581.88	0.00	0.00	0.00
8,200.00	89.51	0.83	7,182.76	682.00	-36.23	681.87	0.00	0.00	0.00
8,300.00	89.51	0.83	7,183.62	781.99	-34.77	781.86	0.00	0.00	0.00
8,400.00	89.51	0.83	7,184.47	881.97	-33.32	881.85	0.00	0.00	0.00
8,500.00	89.51	0.83	7,185.33	981.96	-31.87	981.84	0.00	0.00	0.00

Database:	edm5000p	Local Co-ordinate Reference:	Well BARCLAY 3N-27HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	17' RKB + 4959' GL @ 4976.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + 4959' GL @ 4976.00ft
Site:	WELD_BARCLAY 14-27 PAD	North Reference:	True
Well:	BARCLAY 3N-27HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	BARCLAY 3N-27HZ		
Design:	BARCLAY 3N-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	89.51	0.83	7,186.19	1,081.94	-30.41	1,081.83	0.00	0.00	0.00
8,700.00	89.51	0.83	7,187.04	1,181.93	-28.96	1,181.82	0.00	0.00	0.00
8,800.00	89.51	0.83	7,187.90	1,281.92	-27.51	1,281.81	0.00	0.00	0.00
8,900.00	89.51	0.83	7,188.76	1,381.90	-26.05	1,381.80	0.00	0.00	0.00
9,000.00	89.51	0.83	7,189.61	1,481.89	-24.60	1,481.79	0.00	0.00	0.00
9,100.00	89.51	0.83	7,190.47	1,581.87	-23.14	1,581.78	0.00	0.00	0.00
9,200.00	89.51	0.83	7,191.33	1,681.86	-21.69	1,681.77	0.00	0.00	0.00
9,300.00	89.51	0.83	7,192.18	1,781.84	-20.24	1,781.76	0.00	0.00	0.00
9,400.00	89.51	0.83	7,193.04	1,881.83	-18.78	1,881.75	0.00	0.00	0.00
9,500.00	89.51	0.83	7,193.90	1,981.82	-17.33	1,981.74	0.00	0.00	0.00
9,600.00	89.51	0.83	7,194.76	2,081.80	-15.87	2,081.73	0.00	0.00	0.00
9,700.00	89.51	0.83	7,195.61	2,181.79	-14.42	2,181.72	0.00	0.00	0.00
9,800.00	89.51	0.83	7,196.47	2,281.77	-12.97	2,281.71	0.00	0.00	0.00
9,900.00	89.51	0.83	7,197.33	2,381.76	-11.51	2,381.70	0.00	0.00	0.00
10,000.00	89.51	0.83	7,198.18	2,481.74	-10.06	2,481.69	0.00	0.00	0.00
10,100.00	89.51	0.83	7,199.04	2,581.73	-8.60	2,581.68	0.00	0.00	0.00
10,200.00	89.51	0.83	7,199.90	2,681.72	-7.15	2,681.67	0.00	0.00	0.00
10,300.00	89.51	0.83	7,200.75	2,781.70	-5.70	2,781.66	0.00	0.00	0.00
10,400.00	89.51	0.83	7,201.61	2,881.69	-4.24	2,881.65	0.00	0.00	0.00
10,500.00	89.51	0.83	7,202.47	2,981.67	-2.79	2,981.64	0.00	0.00	0.00
10,600.00	89.51	0.83	7,203.32	3,081.66	-1.33	3,081.63	0.00	0.00	0.00
10,700.00	89.51	0.83	7,204.18	3,181.64	0.12	3,181.62	0.00	0.00	0.00
10,800.00	89.51	0.83	7,205.04	3,281.63	1.57	3,281.61	0.00	0.00	0.00
10,900.00	89.51	0.83	7,205.89	3,381.62	3.03	3,381.61	0.00	0.00	0.00
11,000.00	89.51	0.83	7,206.75	3,481.60	4.48	3,481.60	0.00	0.00	0.00
11,100.00	89.51	0.83	7,207.61	3,581.59	5.93	3,581.59	0.00	0.00	0.00
11,200.00	89.51	0.83	7,208.47	3,681.57	7.39	3,681.58	0.00	0.00	0.00
11,300.00	89.51	0.83	7,209.32	3,781.56	8.84	3,781.57	0.00	0.00	0.00
11,400.00	89.51	0.83	7,210.18	3,881.54	10.30	3,881.56	0.00	0.00	0.00
11,500.00	89.51	0.83	7,211.04	3,981.53	11.75	3,981.55	0.00	0.00	0.00
11,600.00	89.51	0.83	7,211.89	4,081.52	13.20	4,081.54	0.00	0.00	0.00
11,700.00	89.51	0.83	7,212.75	4,181.50	14.66	4,181.53	0.00	0.00	0.00
11,729.26	89.51	0.83	7,213.00	4,210.76	15.08	4,210.78	0.00	0.00	0.00
TD at 11729.26 - BARCLAY 3N-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 3N-27HZ E	0.00	0.00	7,213.00	4,210.76	15.08	1,317,318.17	3,205,153.67	40.202103	-104.765525
- 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	
7,527.90	7,177.00	7"	7	8-3/4	

Database:	edm5000p	Local Co-ordinate Reference:	Well BARCLAY 3N-27HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	17' RKB + 4959' GL @ 4976.00ft
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	17' RKB + 4959' GL @ 4976.00ft
Site:	WELD_BARCLAY 14-27 PAD	North Reference:	True
Well:	BARCLAY 3N-27HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	BARCLAY 3N-27HZ		
Design:	BARCLAY 3N-27HZ (wp01)		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
3,231.77	3,221.00	PARKMAN		0.00		
4,416.03	4,399.00	SUSSEX		0.00		
5,061.44	5,041.00	SHANNON		0.00		
7,142.09	7,049.00	SHARON SPRINGS		0.00		
7,284.19	7,124.00	NIOBRARA		0.00		
7,527.90	7,177.00	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	
1,294.79	1,294.27	-15.09	-1.34	Start 5279.05 hold at 1294.79 MD	
6,573.83	6,545.39	-555.23	-49.19	Start DLS 10.00 TFO 175.73	
7,527.90	7,177.00	10.00	-46.00	Start DLS 1.00 TFO 128.95	
7,530.87	7,177.03	12.97	-45.96	Start 4198.38 hold at 7530.87 MD	
11,729.26	7,213.00	4,210.76	15.08	TD at 11729.26	