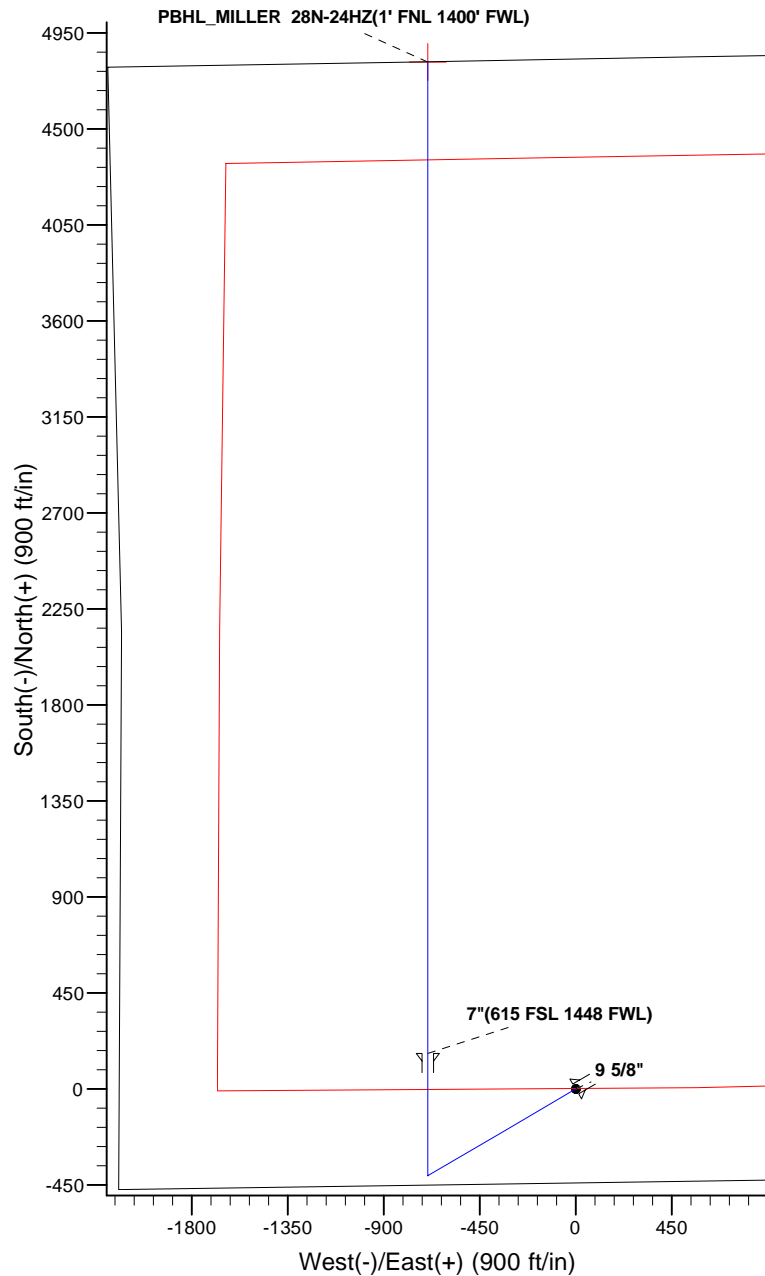
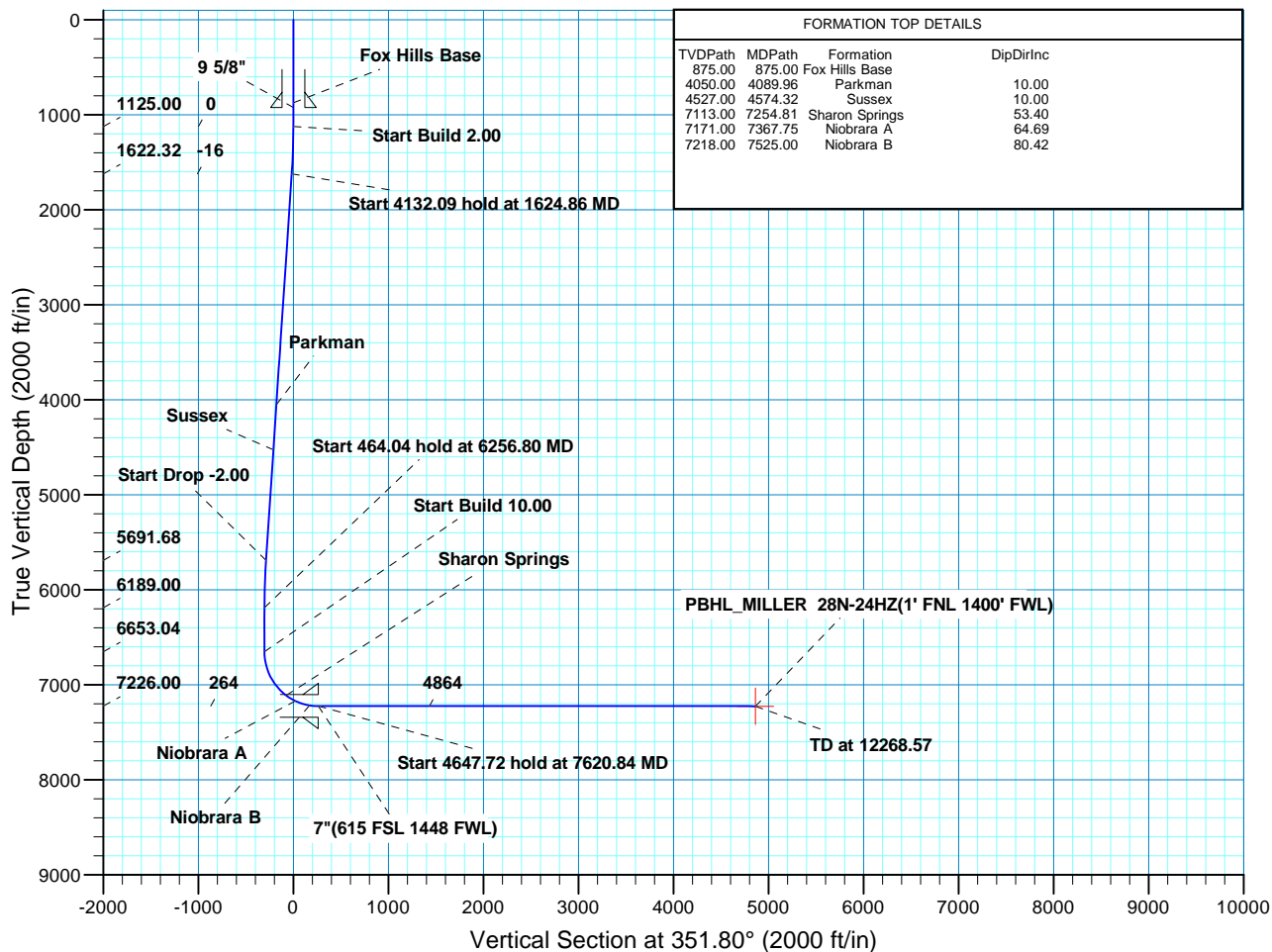


WELL DETAILS: MILLER 28N-24HZ									
GL 5029 & 17 @ 5046.00ft (ASSUMED)									
		+N/-S	+E/-W	Northing	Easting	Latitude	Longitude		
		0.00	0.00	1318375.42	3215834.01	40.2047560	-104.7272570		
SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1125.00	0.00	0.00	1125.00	0.00	0.00	0.00	0.00	0.00	0.00
1624.86	10.00	239.63	1622.32	-21.99	-37.53	2.00	239.63	-16.41	
5756.95	10.00	239.63	5691.68	-384.65	-656.43	0.00	0.00	-287.06	
6256.80	0.00	0.00	6189.00	-406.64	-693.96	2.00	180.00	-303.47	
6720.84	0.00	0.00	6653.04	-406.64	-693.96	0.00	0.00	-303.47	
7620.84	90.00	0.00	7226.00	166.32	-693.96	10.00	0.00	263.63	
12268.57	90.00	0.00	7226.00	4814.04	-693.96	0.00	0.00	4863.80	PBHL_MILLER 28N-24HZ(1' FNL 1400' FWL)
DESIGN TARGET DETAILS							CASING DETAILS		
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape	
PBHL	7226.00	4814.04	-693.96	1323183.21	3215098.13	40.2179710	-104.7297420	Point	
- plan hits target center									
	TVD	MD	Name	Size					
	925.00	925.00	9 5/8"	9.625					
	7226.00	7620.84	7"	7.000					





Scientific Drilling

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

MILLER 14C-24HZ

MILLER 28N-24HZ

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

09 October, 2013

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well MILLER 28N-24HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5029 & 17 @ 5046.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 5029 & 17 @ 5046.00ft (ASSUMED)
Site:	MILLER 14C-24HZ	North Reference:	True
Well:	MILLER 28N-24HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Project	COLORADO NORTHERN ZONE - 83, KERR MCGEE OIL & GAS ONSHORE LP		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		

Site	MILLER 14C-24HZ, SESW SECTION 24 T3N R66W			
Site Position:		Northing:	1,318,374.54 usft	Latitude: 40.2047550
From:	Lat/Long	Easting:	3,215,774.24 usft	Longitude: -104.7274710
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence: 0.50 °

Well	MILLER 28N-24HZ, 458' FSL 2141' FWL			
Well Position	+N/-S	0.36 ft	Northing:	1,318,375.42 usft
	+E/-W	59.77 ft	Easting:	3,215,834.01 usft
Position Uncertainty		0.00 ft	Wellhead Elevation:	0.00 ft
			Ground Level:	5,029.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	10/09/13	8.55	66.81	52,714

Design	PLAN #1 PRELIMINARY			
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	351.80

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	
1,125.00	0.00	0.00	1,125.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,624.86	10.00	239.63	1,622.32	-21.99	-37.53	2.00	2.00	0.00	239.63	
5,756.95	10.00	239.63	5,691.68	-384.65	-656.43	0.00	0.00	0.00	0.00	
6,256.80	0.00	0.00	6,189.00	-406.64	-693.96	2.00	-2.00	0.00	180.00	
6,720.84	0.00	0.00	6,653.04	-406.64	-693.96	0.00	0.00	0.00	0.00	
7,620.84	90.00	0.00	7,226.00	166.32	-693.96	10.00	10.00	0.00	0.00	
12,268.57	90.00	0.00	7,226.00	4,814.04	-693.96	0.00	0.00	0.00	0.00	PBHL_MILLER 28N-

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well MILLER 28N-24HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5029 & 17 @ 5046.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 5029 & 17 @ 5046.00ft (ASSUMED)
Site:	MILLER 14C-24HZ	North Reference:	True
Well:	MILLER 28N-24HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

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
875.00	0.00	0.00	875.00	0.00	0.00	0.00	0.00	0.00	0.00
Fox Hills Base									
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
925.00	0.00	0.00	925.00	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
1,125.00	0.00	0.00	1,125.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
1,200.00	1.50	239.63	1,199.99	-0.50	-0.85	-0.37	2.00	2.00	0.00
1,300.00	3.50	239.63	1,299.89	-2.70	-4.61	-2.02	2.00	2.00	0.00
1,400.00	5.50	239.63	1,399.58	-6.67	-11.38	-4.98	2.00	2.00	0.00
1,500.00	7.50	239.63	1,498.93	-12.39	-21.15	-9.25	2.00	2.00	0.00
1,600.00	9.50	239.63	1,597.83	-19.86	-33.90	-14.82	2.00	2.00	0.00
1,624.86	10.00	239.63	1,622.32	-21.99	-37.53	-16.41	2.00	2.00	0.00
Start 4132.09 hold at 1624.86 MD									
1,700.00	10.00	239.63	1,696.33	-28.59	-48.78	-21.33	0.00	0.00	0.00
1,800.00	10.00	239.63	1,794.81	-37.36	-63.76	-27.88	0.00	0.00	0.00
1,900.00	10.00	239.63	1,893.29	-46.14	-78.74	-34.43	0.00	0.00	0.00
2,000.00	10.00	239.63	1,991.77	-54.92	-93.72	-40.98	0.00	0.00	0.00
2,100.00	10.00	239.63	2,090.25	-63.69	-108.70	-47.53	0.00	0.00	0.00
2,200.00	10.00	239.63	2,188.73	-72.47	-123.67	-54.08	0.00	0.00	0.00
2,300.00	10.00	239.63	2,287.22	-81.25	-138.65	-60.63	0.00	0.00	0.00
2,400.00	10.00	239.63	2,385.70	-90.02	-153.63	-67.18	0.00	0.00	0.00
2,500.00	10.00	239.63	2,484.18	-98.80	-168.61	-73.73	0.00	0.00	0.00
2,600.00	10.00	239.63	2,582.66	-107.58	-183.58	-80.28	0.00	0.00	0.00
2,700.00	10.00	239.63	2,681.14	-116.35	-198.56	-86.83	0.00	0.00	0.00
2,800.00	10.00	239.63	2,779.62	-125.13	-213.54	-93.38	0.00	0.00	0.00
2,900.00	10.00	239.63	2,878.11	-133.91	-228.52	-99.93	0.00	0.00	0.00
3,000.00	10.00	239.63	2,976.59	-142.68	-243.50	-106.48	0.00	0.00	0.00
3,100.00	10.00	239.63	3,075.07	-151.46	-258.47	-113.03	0.00	0.00	0.00
3,200.00	10.00	239.63	3,173.55	-160.24	-273.45	-119.58	0.00	0.00	0.00
3,300.00	10.00	239.63	3,272.03	-169.01	-288.43	-126.13	0.00	0.00	0.00
3,400.00	10.00	239.63	3,370.51	-177.79	-303.41	-132.68	0.00	0.00	0.00
3,500.00	10.00	239.63	3,469.00	-186.57	-318.39	-139.23	0.00	0.00	0.00
3,600.00	10.00	239.63	3,567.48	-195.34	-333.36	-145.78	0.00	0.00	0.00
3,700.00	10.00	239.63	3,665.96	-204.12	-348.34	-152.33	0.00	0.00	0.00
3,800.00	10.00	239.63	3,764.44	-212.90	-363.32	-158.88	0.00	0.00	0.00
3,900.00	10.00	239.63	3,862.92	-221.67	-378.30	-165.43	0.00	0.00	0.00
4,000.00	10.00	239.63	3,961.40	-230.45	-393.28	-171.98	0.00	0.00	0.00
4,089.96	10.00	239.63	4,050.00	-238.34	-406.75	-177.87	0.00	0.00	0.00
Parkman									
4,100.00	10.00	239.63	4,059.89	-239.22	-408.25	-178.53	0.00	0.00	0.00
4,200.00	10.00	239.63	4,158.37	-248.00	-423.23	-185.08	0.00	0.00	0.00
4,300.00	10.00	239.63	4,256.85	-256.78	-438.21	-191.63	0.00	0.00	0.00

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well MILLER 28N-24HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5029 & 17 @ 5046.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 5029 & 17 @ 5046.00ft (ASSUMED)
Site:	MILLER 14C-24HZ	North Reference:	True
Well:	MILLER 28N-24HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

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)
4,400.00	10.00	239.63	4,355.33	-265.55	-453.19	-198.18	0.00	0.00	0.00
4,500.00	10.00	239.63	4,453.81	-274.33	-468.16	-204.73	0.00	0.00	0.00
4,574.32	10.00	239.63	4,527.00	-280.85	-479.30	-209.60	0.00	0.00	0.00
Sussex									
4,600.00	10.00	239.63	4,552.29	-283.11	-483.14	-211.28	0.00	0.00	0.00
4,700.00	10.00	239.63	4,650.78	-291.88	-498.12	-217.83	0.00	0.00	0.00
4,800.00	10.00	239.63	4,749.26	-300.66	-513.10	-224.38	0.00	0.00	0.00
4,900.00	10.00	239.63	4,847.74	-309.44	-528.08	-230.93	0.00	0.00	0.00
5,000.00	10.00	239.63	4,946.22	-318.21	-543.05	-237.48	0.00	0.00	0.00
5,100.00	10.00	239.63	5,044.70	-326.99	-558.03	-244.03	0.00	0.00	0.00
5,200.00	10.00	239.63	5,143.18	-335.77	-573.01	-250.58	0.00	0.00	0.00
5,300.00	10.00	239.63	5,241.67	-344.54	-587.99	-257.13	0.00	0.00	0.00
5,400.00	10.00	239.63	5,340.15	-353.32	-602.97	-263.68	0.00	0.00	0.00
5,500.00	10.00	239.63	5,438.63	-362.10	-617.94	-270.23	0.00	0.00	0.00
5,600.00	10.00	239.63	5,537.11	-370.87	-632.92	-276.78	0.00	0.00	0.00
5,700.00	10.00	239.63	5,635.59	-379.65	-647.90	-283.33	0.00	0.00	0.00
5,756.95	10.00	239.63	5,691.68	-384.65	-656.43	-287.06	0.00	0.00	0.00
Start Drop -2.00									
5,800.00	9.14	239.63	5,734.13	-388.27	-662.60	-289.76	2.00	-2.00	0.00
5,900.00	7.14	239.63	5,833.12	-395.42	-674.81	-295.09	2.00	-2.00	0.00
6,000.00	5.14	239.63	5,932.54	-400.82	-684.03	-299.13	2.00	-2.00	0.00
6,100.00	3.14	239.63	6,032.27	-404.47	-690.26	-301.85	2.00	-2.00	0.00
6,200.00	1.14	239.63	6,132.20	-406.36	-693.47	-303.25	2.00	-2.00	0.00
6,256.80	0.00	0.00	6,189.00	-406.64	-693.96	-303.47	2.00	-2.00	0.00
Start 464.04 hold at 6256.80 MD									
6,300.00	0.00	0.00	6,232.20	-406.64	-693.96	-303.47	0.00	0.00	0.00
6,400.00	0.00	0.00	6,332.20	-406.64	-693.96	-303.47	0.00	0.00	0.00
6,500.00	0.00	0.00	6,432.20	-406.64	-693.96	-303.47	0.00	0.00	0.00
6,600.00	0.00	0.00	6,532.20	-406.64	-693.96	-303.47	0.00	0.00	0.00
6,700.00	0.00	0.00	6,632.20	-406.64	-693.96	-303.47	0.00	0.00	0.00
6,720.84	0.00	0.00	6,653.04	-406.64	-693.96	-303.47	0.00	0.00	0.00
Start Build 10.00									
6,800.00	7.92	0.00	6,731.94	-401.18	-693.96	-298.06	10.00	10.00	0.00
6,900.00	17.92	0.00	6,829.29	-378.86	-693.96	-275.97	10.00	10.00	0.00
7,000.00	27.92	0.00	6,921.28	-339.97	-693.96	-237.48	10.00	10.00	0.00
7,100.00	37.92	0.00	7,005.12	-285.70	-693.96	-183.76	10.00	10.00	0.00
7,200.00	47.92	0.00	7,078.27	-217.69	-693.96	-116.45	10.00	10.00	0.00
7,254.81	53.40	0.00	7,113.00	-175.32	-693.96	-74.52	10.00	10.00	0.00
Sharon Springs									
7,300.00	57.92	0.00	7,138.49	-138.02	-693.96	-37.59	10.00	10.00	0.00
7,367.75	64.69	0.00	7,171.00	-78.63	-693.96	21.19	10.00	10.00	0.00
Niobrara A									
7,400.00	67.92	0.00	7,183.96	-49.10	-693.96	50.42	10.00	10.00	0.00
7,500.00	77.92	0.00	7,213.30	46.37	-693.96	144.91	10.00	10.00	0.00
7,525.00	80.42	0.00	7,218.00	70.92	-693.96	169.21	10.00	10.00	0.00
Niobrara B									
7,600.00	87.92	0.00	7,225.62	145.48	-693.96	243.00	10.00	10.00	0.00
7,620.84	90.00	0.00	7,226.00	166.31	-693.96	263.62	10.00	10.00	0.00
Start 4647.72 hold at 7620.84 MD - 7"(615 FSL 1448 FWL)									
7,700.00	90.00	0.00	7,226.00	245.47	-693.96	341.97	0.00	0.00	0.00
7,800.00	90.00	0.00	7,226.00	345.47	-693.96	440.95	0.00	0.00	0.00
7,900.00	90.00	0.00	7,226.00	445.47	-693.96	539.93	0.00	0.00	0.00
8,000.00	90.00	0.00	7,226.00	545.47	-693.96	638.90	0.00	0.00	0.00

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well MILLER 28N-24HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5029 & 17 @ 5046.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 5029 & 17 @ 5046.00ft (ASSUMED)
Site:	MILLER 14C-24HZ	North Reference:	True
Well:	MILLER 28N-24HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

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)
8,100.00	90.00	0.00	7,226.00	645.47	-693.96	737.88	0.00	0.00	0.00
8,200.00	90.00	0.00	7,226.00	745.47	-693.96	836.86	0.00	0.00	0.00
8,300.00	90.00	0.00	7,226.00	845.47	-693.96	935.84	0.00	0.00	0.00
8,400.00	90.00	0.00	7,226.00	945.47	-693.96	1,034.81	0.00	0.00	0.00
8,500.00	90.00	0.00	7,226.00	1,045.47	-693.96	1,133.79	0.00	0.00	0.00
8,600.00	90.00	0.00	7,226.00	1,145.47	-693.96	1,232.77	0.00	0.00	0.00
8,700.00	90.00	0.00	7,226.00	1,245.47	-693.96	1,331.74	0.00	0.00	0.00
8,800.00	90.00	0.00	7,226.00	1,345.47	-693.96	1,430.72	0.00	0.00	0.00
8,900.00	90.00	0.00	7,226.00	1,445.47	-693.96	1,529.70	0.00	0.00	0.00
9,000.00	90.00	0.00	7,226.00	1,545.47	-693.96	1,628.67	0.00	0.00	0.00
9,100.00	90.00	0.00	7,226.00	1,645.47	-693.96	1,727.65	0.00	0.00	0.00
9,200.00	90.00	0.00	7,226.00	1,745.47	-693.96	1,826.63	0.00	0.00	0.00
9,300.00	90.00	0.00	7,226.00	1,845.47	-693.96	1,925.60	0.00	0.00	0.00
9,400.00	90.00	0.00	7,226.00	1,945.47	-693.96	2,024.58	0.00	0.00	0.00
9,500.00	90.00	0.00	7,226.00	2,045.47	-693.96	2,123.56	0.00	0.00	0.00
9,600.00	90.00	0.00	7,226.00	2,145.47	-693.96	2,222.54	0.00	0.00	0.00
9,700.00	90.00	0.00	7,226.00	2,245.47	-693.96	2,321.51	0.00	0.00	0.00
9,800.00	90.00	0.00	7,226.00	2,345.47	-693.96	2,420.49	0.00	0.00	0.00
9,900.00	90.00	0.00	7,226.00	2,445.47	-693.96	2,519.47	0.00	0.00	0.00
10,000.00	90.00	0.00	7,226.00	2,545.47	-693.96	2,618.44	0.00	0.00	0.00
10,100.00	90.00	0.00	7,226.00	2,645.47	-693.96	2,717.42	0.00	0.00	0.00
10,200.00	90.00	0.00	7,226.00	2,745.47	-693.96	2,816.40	0.00	0.00	0.00
10,300.00	90.00	0.00	7,226.00	2,845.47	-693.96	2,915.37	0.00	0.00	0.00
10,400.00	90.00	0.00	7,226.00	2,945.47	-693.96	3,014.35	0.00	0.00	0.00
10,500.00	90.00	0.00	7,226.00	3,045.47	-693.96	3,113.33	0.00	0.00	0.00
10,600.00	90.00	0.00	7,226.00	3,145.47	-693.96	3,212.30	0.00	0.00	0.00
10,700.00	90.00	0.00	7,226.00	3,245.47	-693.96	3,311.28	0.00	0.00	0.00
10,800.00	90.00	0.00	7,226.00	3,345.47	-693.96	3,410.26	0.00	0.00	0.00
10,900.00	90.00	0.00	7,226.00	3,445.47	-693.96	3,509.24	0.00	0.00	0.00
11,000.00	90.00	0.00	7,226.00	3,545.47	-693.96	3,608.21	0.00	0.00	0.00
11,100.00	90.00	0.00	7,226.00	3,645.47	-693.96	3,707.19	0.00	0.00	0.00
11,200.00	90.00	0.00	7,226.00	3,745.47	-693.96	3,806.17	0.00	0.00	0.00
11,300.00	90.00	0.00	7,226.00	3,845.47	-693.96	3,905.14	0.00	0.00	0.00
11,400.00	90.00	0.00	7,226.00	3,945.47	-693.96	4,004.12	0.00	0.00	0.00
11,500.00	90.00	0.00	7,226.00	4,045.47	-693.96	4,103.10	0.00	0.00	0.00
11,600.00	90.00	0.00	7,226.00	4,145.47	-693.96	4,202.07	0.00	0.00	0.00
11,700.00	90.00	0.00	7,226.00	4,245.47	-693.96	4,301.05	0.00	0.00	0.00
11,800.00	90.00	0.00	7,226.00	4,345.47	-693.96	4,400.03	0.00	0.00	0.00
11,900.00	90.00	0.00	7,226.00	4,445.47	-693.96	4,499.00	0.00	0.00	0.00
12,000.00	90.00	0.00	7,226.00	4,545.47	-693.96	4,597.98	0.00	0.00	0.00
12,100.00	90.00	0.00	7,226.00	4,645.47	-693.96	4,696.96	0.00	0.00	0.00
12,200.00	90.00	0.00	7,226.00	4,745.47	-693.96	4,795.94	0.00	0.00	0.00
12,268.57	90.00	0.00	7,226.00	4,814.04	-693.96	4,863.80	0.00	0.00	0.00
TD at 12268.57 - PBHL_MILLER 28N-24HZ(1' FNL 1400' FWL)									

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well MILLER 28N-24HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5029 & 17 @ 5046.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 5029 & 17 @ 5046.00ft (ASSUMED)
Site:	MILLER 14C-24HZ	North Reference:	True
Well:	MILLER 28N-24HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Design Targets									
Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
- Shape									
PBHL_MILLER 28N-24I	0.00	0.00	7,226.00	4,814.04	-693.96	1,323,183.21	3,215,098.13	40.2179710	-104.7297420
- plan hits target center									
- Point									

Casing Points					
Measured Depth	Vertical Depth	Name		Casing Diameter	Hole Diameter
(ft)	(ft)			(in)	(in)
925.00	925.00	9 5/8"		9.625	12.250
7,620.84	7,226.00	7"(615 FSL 1448 FWL)		7.000	7.500

Formations						
Measured Depth	Vertical Depth	Name	Lithology	Dip	Dip Direction	
(ft)	(ft)			(°)	(°)	
875.00	875.00	Fox Hills Base				
4,089.96	4,050.00	Parkman				
4,574.32	4,527.00	Sussex				
7,254.81	7,113.00	Sharon Springs				
7,367.75	7,171.00	Niobrara A				
7,525.00	7,218.00	Niobrara B				

Plan Annotations					
Measured Depth	Vertical Depth	Local Coordinates		Comment	
(ft)	(ft)	+N/-S	+E/-W		
(ft)	(ft)	(ft)	(ft)		
1,125.00	1,125.00	0.00	0.00	Start Build 2.00	
1,624.86	1,622.32	-21.99	-37.53	Start 4132.09 hold at 1624.86 MD	
5,756.95	5,691.68	-384.65	-656.43	Start Drop -2.00	
6,256.80	6,189.00	-406.64	-693.96	Start 464.04 hold at 6256.80 MD	
6,720.84	6,653.04	-406.64	-693.96	Start Build 10.00	
7,620.84	7,226.00	166.32	-693.96	Start 4647.72 hold at 7620.84 MD	
12,268.57	7,226.00	4,814.04	-693.96	TD at 12268.57	