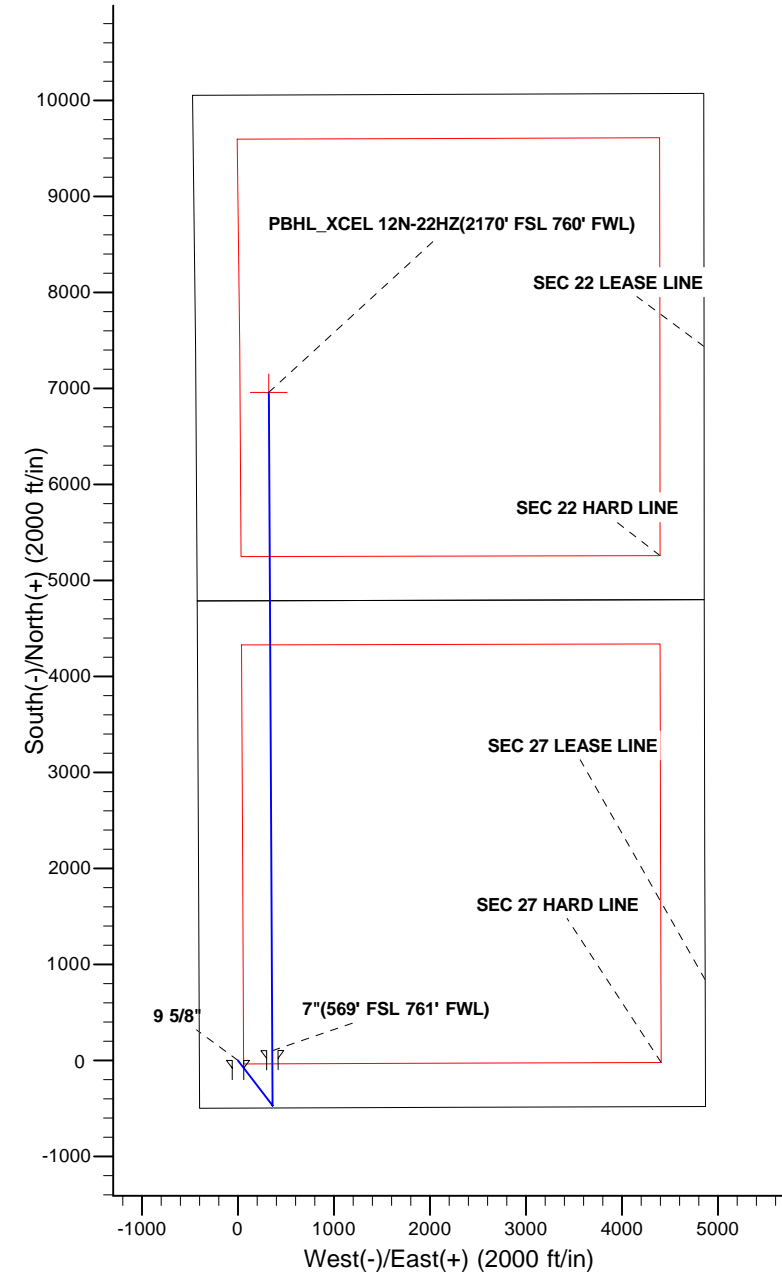
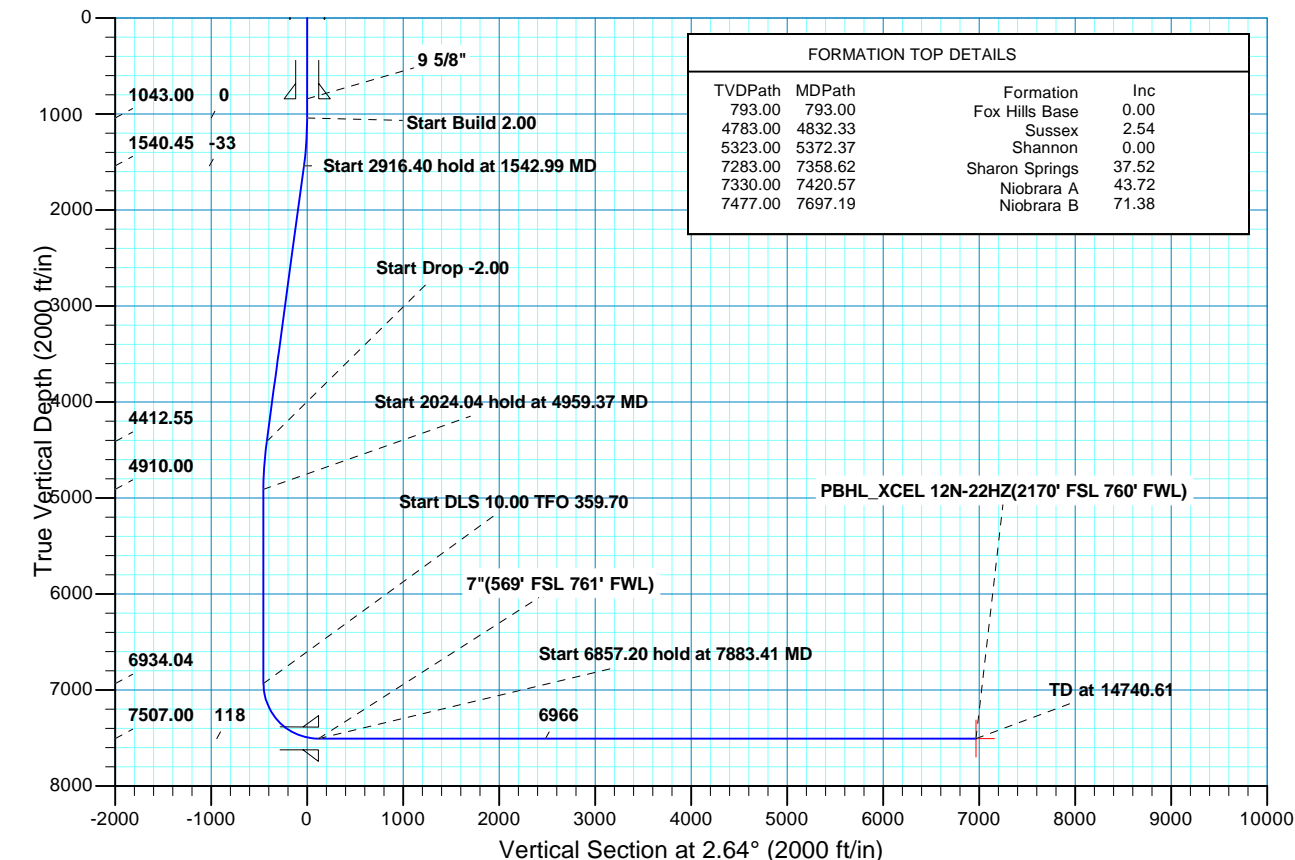


WELL DETAILS: XCEL 12N-22HZ									
GL 5026 & KB 17 @ 5043.00ft (ASSUMED)									
		+N/-S	+E/-W	Northing	Easting	Latitude	Longitude		
		0.00	0.00	1249341.06	3172361.42	40.0161860	-104.8846100		
SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1043.00	0.00	0.00	1043.00	0.00	0.00	0.00	0.00	0.00	
1542.99	10.00	142.57	1540.45	-34.56	26.45	2.00	142.57	-33.31	
4459.39	10.00	142.57	4412.55	-436.73	334.21	0.00	0.00	-420.86	
4959.37	0.00	0.00	4910.00	-471.29	360.66	2.00	180.00	-454.16	
6983.41	0.00	0.00	6934.04	-471.29	360.66	0.00	0.00	-454.16	
7883.41	90.00	359.70	7507.00	101.66	357.61	10.00	359.70	118.04	
14740.61	90.00	359.70	7507.00	6958.76	321.17	0.00	0.00	6966.17	PBHL_XCEL 12N-22HZ(2170' FSL 760' FWL)
						CASING DETAILS			
						TVD	MD	Name	Size
						843.00	843.00	9 5/8"	9.625
						7507.00	7883.41	7"	7.000





Scientific Drilling

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

XCEL 12N-22HZ 1N67W27 Pad

XCEL 12N-22HZ

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

30 May, 2013

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well XCEL 12N-22HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5026 & KB 17 @ 5043.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 5026 & KB 17 @ 5043.00ft (ASSUMED)
Site:	XCEL 12N-22HZ 1N67W27 Pad	North Reference:	True
Well:	XCEL 12N-22HZ	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	XCEL 12N-22HZ 1N67W27 Pad, SECTION 27 T1N R67W			
Site Position:		Northing:	1,249,341.05 usft	Latitude: 40.0161860
From:	Lat/Long	Easting:	3,172,361.42 usft	Longitude: -104.8846100
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence: 0.40 °

Well	XCEL 12N-22HZ, 469' FSL 403' FWL			
Well Position	+N/-S	0.00 ft	Northing:	1,249,341.05 usft
	+E/-W	0.00 ft	Easting:	3,172,361.42 usft
Position Uncertainty		0.00 ft	Wellhead Elevation:	Ground Level: 5,026.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2012	2013/05/29	8.69	66.63	52,609

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	2.64

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	
1,043.00	0.00	0.00	1,043.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,542.99	10.00	142.57	1,540.45	-34.56	26.45	2.00	2.00	0.00	142.57	
4,459.39	10.00	142.57	4,412.55	-436.73	334.21	0.00	0.00	0.00	0.00	
4,959.37	0.00	0.00	4,910.00	-471.29	360.66	2.00	-2.00	0.00	180.00	
6,983.41	0.00	0.00	6,934.04	-471.29	360.66	0.00	0.00	0.00	0.00	
7,883.41	90.00	359.70	7,507.00	101.66	357.61	10.00	10.00	-0.03	359.70	
14,740.61	90.00	359.70	7,507.00	6,958.76	321.17	0.00	0.00	0.00	0.00	PBHL_XCEL 12N-22H

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well XCEL 12N-22HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5026 & KB 17 @ 5043.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 5026 & KB 17 @ 5043.00ft (ASSUMED)
Site:	XCEL 12N-22HZ 1N67W27 Pad	North Reference:	True
Well:	XCEL 12N-22HZ	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
793.00	0.00	0.00	793.00	0.00	0.00	0.00	0.00	0.00	0.00
Fox Hills Base									
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
843.00	0.00	0.00	843.00	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
1,043.00	0.00	0.00	1,043.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
1,100.00	1.14	142.57	1,100.00	-0.45	0.34	-0.43	2.00	2.00	0.00
1,200.00	3.14	142.57	1,199.92	-3.42	2.61	-3.29	2.00	2.00	0.00
1,300.00	5.14	142.57	1,299.66	-9.15	7.00	-8.82	2.00	2.00	0.00
1,400.00	7.14	142.57	1,399.08	-17.64	13.50	-17.00	2.00	2.00	0.00
1,500.00	9.14	142.57	1,498.06	-28.89	22.11	-27.84	2.00	2.00	0.00
1,542.99	10.00	142.57	1,540.45	-34.56	26.45	-33.31	2.00	2.00	0.00
Start 2916.40 hold at 1542.99 MD									
1,600.00	10.00	142.57	1,596.60	-42.42	32.47	-40.88	0.00	0.00	0.00
1,700.00	10.00	142.57	1,695.08	-56.21	43.02	-54.17	0.00	0.00	0.00
1,800.00	10.00	142.57	1,793.56	-70.00	53.57	-67.46	0.00	0.00	0.00
1,900.00	10.00	142.57	1,892.04	-83.79	64.12	-80.75	0.00	0.00	0.00
2,000.00	10.00	142.57	1,990.52	-97.58	74.68	-94.04	0.00	0.00	0.00
2,100.00	10.00	142.57	2,089.00	-111.37	85.23	-107.32	0.00	0.00	0.00
2,200.00	10.00	142.57	2,187.48	-125.16	95.78	-120.61	0.00	0.00	0.00
2,300.00	10.00	142.57	2,285.97	-138.95	106.33	-133.90	0.00	0.00	0.00
2,400.00	10.00	142.57	2,384.45	-152.74	116.89	-147.19	0.00	0.00	0.00
2,500.00	10.00	142.57	2,482.93	-166.53	127.44	-160.48	0.00	0.00	0.00
2,600.00	10.00	142.57	2,581.41	-180.32	137.99	-173.77	0.00	0.00	0.00
2,700.00	10.00	142.57	2,679.89	-194.11	148.55	-187.06	0.00	0.00	0.00
2,800.00	10.00	142.57	2,778.37	-207.90	159.10	-200.35	0.00	0.00	0.00
2,900.00	10.00	142.57	2,876.85	-221.69	169.65	-213.63	0.00	0.00	0.00
3,000.00	10.00	142.57	2,975.33	-235.48	180.20	-226.92	0.00	0.00	0.00
3,100.00	10.00	142.57	3,073.81	-249.27	190.76	-240.21	0.00	0.00	0.00
3,200.00	10.00	142.57	3,172.29	-263.06	201.31	-253.50	0.00	0.00	0.00
3,300.00	10.00	142.57	3,270.77	-276.85	211.86	-266.79	0.00	0.00	0.00
3,400.00	10.00	142.57	3,369.25	-290.64	222.42	-280.08	0.00	0.00	0.00
3,500.00	10.00	142.57	3,467.74	-304.43	232.97	-293.37	0.00	0.00	0.00
3,600.00	10.00	142.57	3,566.22	-318.22	243.52	-306.65	0.00	0.00	0.00
3,700.00	10.00	142.57	3,664.70	-332.01	254.07	-319.94	0.00	0.00	0.00
3,800.00	10.00	142.57	3,763.18	-345.80	264.63	-333.23	0.00	0.00	0.00
3,900.00	10.00	142.57	3,861.66	-359.59	275.18	-346.52	0.00	0.00	0.00
4,000.00	10.00	142.57	3,960.14	-373.38	285.73	-359.81	0.00	0.00	0.00
4,100.00	10.00	142.57	4,058.62	-387.17	296.29	-373.10	0.00	0.00	0.00
4,200.00	10.00	142.57	4,157.10	-400.96	306.84	-386.39	0.00	0.00	0.00
4,300.00	10.00	142.57	4,255.58	-414.75	317.39	-399.68	0.00	0.00	0.00
4,400.00	10.00	142.57	4,354.06	-428.54	327.94	-412.96	0.00	0.00	0.00
4,459.39	10.00	142.57	4,412.55	-436.73	334.21	-420.86	0.00	0.00	0.00

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well XCEL 12N-22HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5026 & KB 17 @ 5043.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 5026 & KB 17 @ 5043.00ft (ASSUMED)
Site:	XCEL 12N-22HZ 1N67W27 Pad	North Reference:	True
Well:	XCEL 12N-22HZ	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)
Start Drop -2.00									
4,500.00	9.19	142.57	4,452.59	-442.10	338.32	-426.04	2.00	-2.00	0.00
4,600.00	7.19	142.57	4,551.57	-453.41	346.98	-436.93	2.00	-2.00	0.00
4,700.00	5.19	142.57	4,650.98	-461.97	353.53	-445.18	2.00	-2.00	0.00
4,800.00	3.19	142.57	4,750.71	-467.77	357.97	-450.77	2.00	-2.00	0.00
4,832.33	2.54	142.57	4,783.00	-469.05	358.95	-452.01	2.00	-2.00	0.00
Sussex									
4,900.00	1.19	142.57	4,850.63	-470.80	360.29	-453.69	2.00	-2.00	0.00
4,959.37	0.00	0.00	4,910.00	-471.29	360.66	-454.16	2.00	-2.00	0.00
Start 2024.04 hold at 4959.37 MD									
5,000.00	0.00	0.00	4,950.63	-471.29	360.66	-454.16	0.00	0.00	0.00
5,100.00	0.00	0.00	5,050.63	-471.29	360.66	-454.16	0.00	0.00	0.00
5,200.00	0.00	0.00	5,150.63	-471.29	360.66	-454.16	0.00	0.00	0.00
5,300.00	0.00	0.00	5,250.63	-471.29	360.66	-454.16	0.00	0.00	0.00
5,372.37	0.00	0.00	5,323.00	-471.29	360.66	-454.16	0.00	0.00	0.00
Shannon									
5,400.00	0.00	0.00	5,350.63	-471.29	360.66	-454.16	0.00	0.00	0.00
5,500.00	0.00	0.00	5,450.63	-471.29	360.66	-454.16	0.00	0.00	0.00
5,600.00	0.00	0.00	5,550.63	-471.29	360.66	-454.16	0.00	0.00	0.00
5,700.00	0.00	0.00	5,650.63	-471.29	360.66	-454.16	0.00	0.00	0.00
5,800.00	0.00	0.00	5,750.63	-471.29	360.66	-454.16	0.00	0.00	0.00
5,900.00	0.00	0.00	5,850.63	-471.29	360.66	-454.16	0.00	0.00	0.00
6,000.00	0.00	0.00	5,950.63	-471.29	360.66	-454.16	0.00	0.00	0.00
6,100.00	0.00	0.00	6,050.63	-471.29	360.66	-454.16	0.00	0.00	0.00
6,200.00	0.00	0.00	6,150.63	-471.29	360.66	-454.16	0.00	0.00	0.00
6,300.00	0.00	0.00	6,250.63	-471.29	360.66	-454.16	0.00	0.00	0.00
6,400.00	0.00	0.00	6,350.63	-471.29	360.66	-454.16	0.00	0.00	0.00
6,500.00	0.00	0.00	6,450.63	-471.29	360.66	-454.16	0.00	0.00	0.00
6,600.00	0.00	0.00	6,550.63	-471.29	360.66	-454.16	0.00	0.00	0.00
6,700.00	0.00	0.00	6,650.63	-471.29	360.66	-454.16	0.00	0.00	0.00
6,800.00	0.00	0.00	6,750.63	-471.29	360.66	-454.16	0.00	0.00	0.00
6,900.00	0.00	0.00	6,850.63	-471.29	360.66	-454.16	0.00	0.00	0.00
6,983.41	0.00	0.00	6,934.04	-471.29	360.66	-454.16	0.00	0.00	0.00
Start DLS 10.00 TFO 359.70									
7,000.00	1.66	359.70	6,950.62	-471.05	360.66	-453.92	10.00	10.00	0.00
7,100.00	11.66	359.70	7,049.82	-459.47	360.60	-442.36	10.00	10.00	0.00
7,200.00	21.66	359.70	7,145.51	-430.84	360.45	-413.76	10.00	10.00	0.00
7,300.00	31.66	359.70	7,234.76	-386.03	360.21	-369.01	10.00	10.00	0.00
7,358.62	37.52	359.70	7,283.00	-352.76	360.03	-335.79	10.00	10.00	0.00
Sharon Springs									
7,400.00	41.66	359.70	7,314.88	-326.40	359.89	-309.46	10.00	10.00	0.00
7,420.57	43.72	359.70	7,330.00	-312.46	359.82	-295.53	10.00	10.00	0.00
Niobrara A									
7,500.00	51.66	359.70	7,383.43	-253.77	359.50	-236.92	10.00	10.00	0.00
7,600.00	61.66	359.70	7,438.32	-170.33	359.06	-153.60	10.00	10.00	0.00
7,697.19	71.38	359.70	7,477.00	-81.30	358.59	-64.68	10.00	10.00	0.00
Niobrara B									
7,700.00	71.66	359.70	7,477.89	-78.63	358.57	-62.02	10.00	10.00	0.00
7,800.00	81.66	359.70	7,500.94	18.54	358.06	35.03	10.00	10.00	0.00
7,883.41	90.00	359.70	7,507.00	101.66	357.61	118.04	10.00	10.00	0.00
Start 6857.20 hold at 7883.41 MD - 7"(569' FSL 761' FWL)									
7,900.00	90.00	359.70	7,507.00	118.25	357.53	134.60	0.00	0.00	0.00
8,000.00	90.00	359.70	7,507.00	218.24	357.00	234.47	0.00	0.00	0.00

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well XCEL 12N-22HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5026 & KB 17 @ 5043.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 5026 & KB 17 @ 5043.00ft (ASSUMED)
Site:	XCEL 12N-22HZ 1N67W27 Pad	North Reference:	True
Well:	XCEL 12N-22HZ	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	359.70	7,507.00	318.24	356.46	334.34	0.00	0.00	0.00
8,200.00	90.00	359.70	7,507.00	418.24	355.93	434.21	0.00	0.00	0.00
8,300.00	90.00	359.70	7,507.00	518.24	355.40	534.07	0.00	0.00	0.00
8,400.00	90.00	359.70	7,507.00	618.24	354.87	633.94	0.00	0.00	0.00
8,500.00	90.00	359.70	7,507.00	718.24	354.34	733.81	0.00	0.00	0.00
8,600.00	90.00	359.70	7,507.00	818.24	353.81	833.68	0.00	0.00	0.00
8,700.00	90.00	359.70	7,507.00	918.23	353.27	933.55	0.00	0.00	0.00
8,800.00	90.00	359.70	7,507.00	1,018.23	352.74	1,033.41	0.00	0.00	0.00
8,900.00	90.00	359.70	7,507.00	1,118.23	352.21	1,133.28	0.00	0.00	0.00
9,000.00	90.00	359.70	7,507.00	1,218.23	351.68	1,233.15	0.00	0.00	0.00
9,100.00	90.00	359.70	7,507.00	1,318.23	351.15	1,333.02	0.00	0.00	0.00
9,200.00	90.00	359.70	7,507.00	1,418.23	350.62	1,432.88	0.00	0.00	0.00
9,300.00	90.00	359.70	7,507.00	1,518.23	350.09	1,532.75	0.00	0.00	0.00
9,400.00	90.00	359.70	7,507.00	1,618.22	349.55	1,632.62	0.00	0.00	0.00
9,500.00	90.00	359.70	7,507.00	1,718.22	349.02	1,732.49	0.00	0.00	0.00
9,600.00	90.00	359.70	7,507.00	1,818.22	348.49	1,832.36	0.00	0.00	0.00
9,700.00	90.00	359.70	7,507.00	1,918.22	347.96	1,932.22	0.00	0.00	0.00
9,800.00	90.00	359.70	7,507.00	2,018.22	347.43	2,032.09	0.00	0.00	0.00
9,900.00	90.00	359.70	7,507.00	2,118.22	346.90	2,131.96	0.00	0.00	0.00
10,000.00	90.00	359.70	7,507.00	2,218.22	346.37	2,231.83	0.00	0.00	0.00
10,100.00	90.00	359.70	7,507.00	2,318.22	345.83	2,331.69	0.00	0.00	0.00
10,200.00	90.00	359.70	7,507.00	2,418.21	345.30	2,431.56	0.00	0.00	0.00
10,300.00	90.00	359.70	7,507.00	2,518.21	344.77	2,531.43	0.00	0.00	0.00
10,400.00	90.00	359.70	7,507.00	2,618.21	344.24	2,631.30	0.00	0.00	0.00
10,500.00	90.00	359.70	7,507.00	2,718.21	343.71	2,731.17	0.00	0.00	0.00
10,600.00	90.00	359.70	7,507.00	2,818.21	343.18	2,831.03	0.00	0.00	0.00
10,700.00	90.00	359.70	7,507.00	2,918.21	342.65	2,930.90	0.00	0.00	0.00
10,800.00	90.00	359.70	7,507.00	3,018.21	342.11	3,030.77	0.00	0.00	0.00
10,900.00	90.00	359.70	7,507.00	3,118.20	341.58	3,130.64	0.00	0.00	0.00
11,000.00	90.00	359.70	7,507.00	3,218.20	341.05	3,230.50	0.00	0.00	0.00
11,100.00	90.00	359.70	7,507.00	3,318.20	340.52	3,330.37	0.00	0.00	0.00
11,200.00	90.00	359.70	7,507.00	3,418.20	339.99	3,430.24	0.00	0.00	0.00
11,300.00	90.00	359.70	7,507.00	3,518.20	339.46	3,530.11	0.00	0.00	0.00
11,400.00	90.00	359.70	7,507.00	3,618.20	338.93	3,629.98	0.00	0.00	0.00
11,500.00	90.00	359.70	7,507.00	3,718.20	338.39	3,729.84	0.00	0.00	0.00
11,600.00	90.00	359.70	7,507.00	3,818.19	337.86	3,829.71	0.00	0.00	0.00
11,700.00	90.00	359.70	7,507.00	3,918.19	337.33	3,929.58	0.00	0.00	0.00
11,800.00	90.00	359.70	7,507.00	4,018.19	336.80	4,029.45	0.00	0.00	0.00
11,900.00	90.00	359.70	7,507.00	4,118.19	336.27	4,129.31	0.00	0.00	0.00
12,000.00	90.00	359.70	7,507.00	4,218.19	335.74	4,229.18	0.00	0.00	0.00
12,100.00	90.00	359.70	7,507.00	4,318.19	335.20	4,329.05	0.00	0.00	0.00
12,200.00	90.00	359.70	7,507.00	4,418.19	334.67	4,428.92	0.00	0.00	0.00
12,300.00	90.00	359.70	7,507.00	4,518.18	334.14	4,528.78	0.00	0.00	0.00
12,400.00	90.00	359.70	7,507.00	4,618.18	333.61	4,628.65	0.00	0.00	0.00
12,500.00	90.00	359.70	7,507.00	4,718.18	333.08	4,728.52	0.00	0.00	0.00
12,600.00	90.00	359.70	7,507.00	4,818.18	332.55	4,828.39	0.00	0.00	0.00
12,700.00	90.00	359.70	7,507.00	4,918.18	332.02	4,928.26	0.00	0.00	0.00
12,800.00	90.00	359.70	7,507.00	5,018.18	331.48	5,028.12	0.00	0.00	0.00
12,900.00	90.00	359.70	7,507.00	5,118.18	330.95	5,127.99	0.00	0.00	0.00
13,000.00	90.00	359.70	7,507.00	5,218.17	330.42	5,227.86	0.00	0.00	0.00
13,100.00	90.00	359.70	7,507.00	5,318.17	329.89	5,327.73	0.00	0.00	0.00
13,200.00	90.00	359.70	7,507.00	5,418.17	329.36	5,427.59	0.00	0.00	0.00
13,300.00	90.00	359.70	7,507.00	5,518.17	328.83	5,527.46	0.00	0.00	0.00
13,400.00	90.00	359.70	7,507.00	5,618.17	328.30	5,627.33	0.00	0.00	0.00

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well XCEL 12N-22HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5026 & KB 17 @ 5043.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 5026 & KB 17 @ 5043.00ft (ASSUMED)
Site:	XCEL 12N-22HZ 1N67W27 Pad	North Reference:	True
Well:	XCEL 12N-22HZ	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)
13,500.00	90.00	359.70	7,507.00	5,718.17	327.76	5,727.20	0.00	0.00	0.00
13,600.00	90.00	359.70	7,507.00	5,818.17	327.23	5,827.07	0.00	0.00	0.00
13,700.00	90.00	359.70	7,507.00	5,918.16	326.70	5,926.93	0.00	0.00	0.00
13,800.00	90.00	359.70	7,507.00	6,018.16	326.17	6,026.80	0.00	0.00	0.00
13,900.00	90.00	359.70	7,507.00	6,118.16	325.64	6,126.67	0.00	0.00	0.00
14,000.00	90.00	359.70	7,507.00	6,218.16	325.11	6,226.54	0.00	0.00	0.00
14,100.00	90.00	359.70	7,507.00	6,318.16	324.58	6,326.40	0.00	0.00	0.00
14,200.00	90.00	359.70	7,507.00	6,418.16	324.04	6,426.27	0.00	0.00	0.00
14,300.00	90.00	359.70	7,507.00	6,518.16	323.51	6,526.14	0.00	0.00	0.00
14,400.00	90.00	359.70	7,507.00	6,618.15	322.98	6,626.01	0.00	0.00	0.00
14,500.00	90.00	359.70	7,507.00	6,718.15	322.45	6,725.88	0.00	0.00	0.00
14,600.00	90.00	359.70	7,507.00	6,818.15	321.92	6,825.74	0.00	0.00	0.00
14,700.00	90.00	359.70	7,507.00	6,918.15	321.39	6,925.61	0.00	0.00	0.00
14,740.61	90.00	359.70	7,507.00	6,958.76	321.17	6,966.17	0.00	0.00	0.00
TD at 14740.61 - PBHL_XCEL 12N-22HZ(2170' FSL 760' FWL)									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL_XCEL 12N-22HZ	0.00	0.00	7,507.00	6,958.76	321.17	1,256,301.86	3,172,634.29	40.0352890	-104.8834630
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
843.00	843.00	9 5/8"	9.625	12.250	
7,883.41	7,507.00	7"(569' FSL 761' FWL)	7.000	7.500	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
793.00	804.00	Fox Hills Base				
4,832.33	4,794.00	Sussex				
5,372.37	5,334.00	Shannon				
7,358.62	7,294.00	Sharon Springs				
7,420.57	7,341.00	Niobrara A				
7,697.19	7,488.00	Niobrara B				

Database:	EDM5000-RobertS-Local	Local Co-ordinate Reference:	Well XCEL 12N-22HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 5026 & KB 17 @ 5043.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 5026 & KB 17 @ 5043.00ft (ASSUMED)
Site:	XCEL 12N-22HZ 1N67W27 Pad	North Reference:	True
Well:	XCEL 12N-22HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,043.00	1,043.00	0.00	0.00	Start Build 2.00
1,542.99	1,540.45	-34.56	26.45	Start 2916.40 hold at 1542.99 MD
4,459.39	4,412.55	-436.73	334.21	Start Drop -2.00
4,959.37	4,910.00	-471.29	360.66	Start 2024.04 hold at 4959.37 MD
6,983.41	6,934.04	-471.29	360.66	Start DLS 10.00 TFO 359.70
7,883.41	7,507.00	101.66	357.61	Start 6857.20 hold at 7883.41 MD
14,740.61	7,507.00	6,958.76	321.17	TD at 14740.61