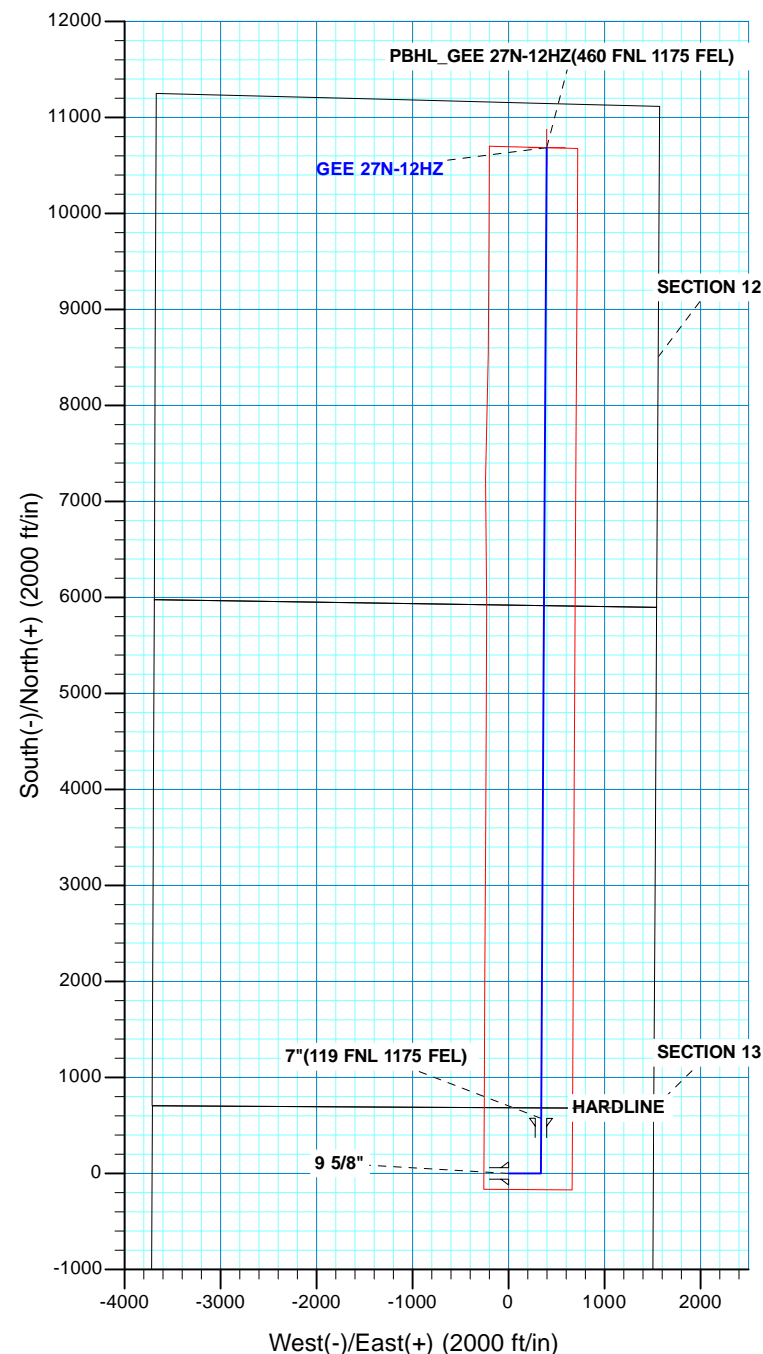
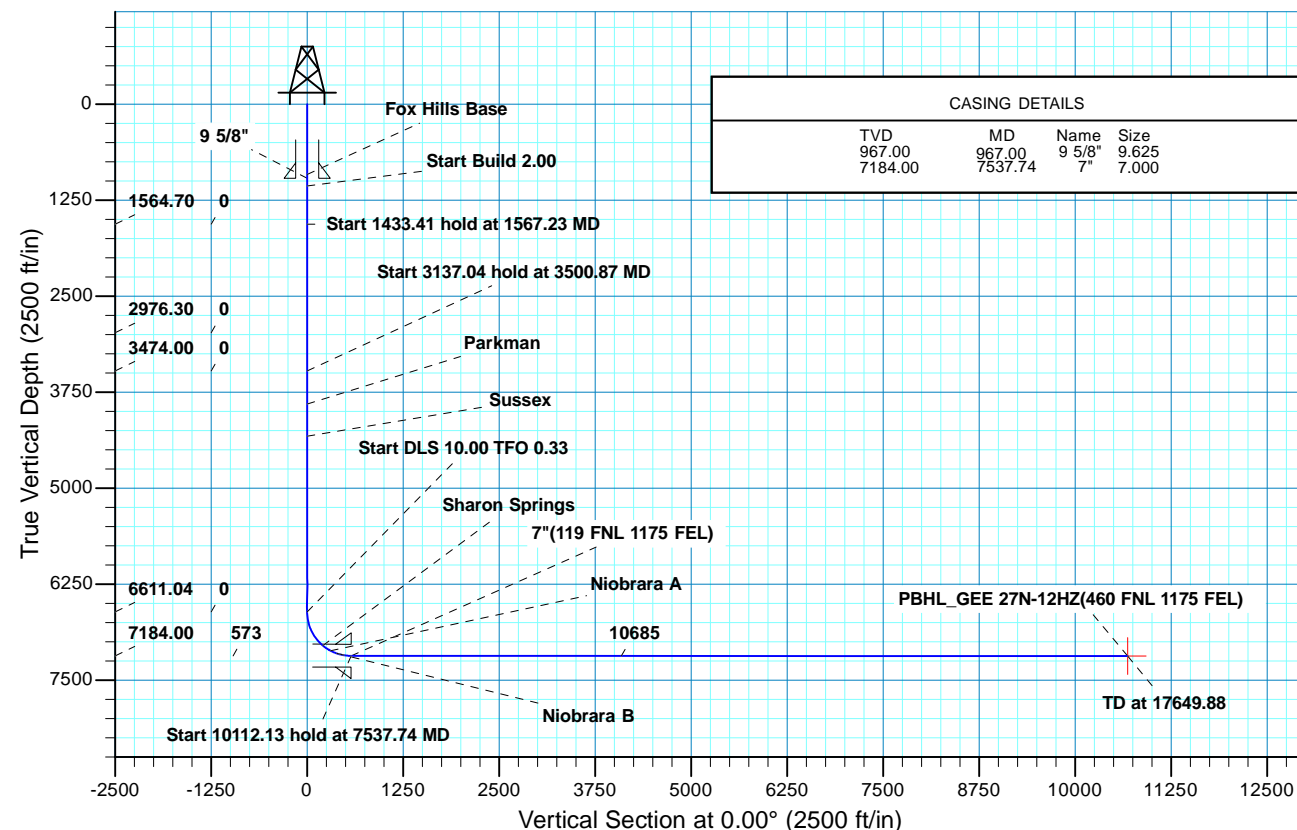




Project: COLORADO NORTHERN ZONE - 83
 Site: GEE 17-24HZ PAD
 Well: GEE 27N-12HZ
 Wellbore: OH
 Design: PLAN #1 PRELIMINARY



WELL DETAILS: GEE 27N-12HZ																	
GL 4858 & KB 17 @ 4875.00ft (ASSUMED)																	
+N/-S 0.00		+E/-W 0.00		Northing 1290477.48		Easting 3185856.71		Latitude 40.1288419		Longitude -104.8353280							
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								
1067.00	0.00	0.00	1067.00	0.00	0.00	0.00	0.00	0.00	0.00								
1567.23	10.00	90.00	1564.70	0.00	43.56	2.00	90.00	0.00	0.00								
3000.64	10.00	90.00	2976.30	0.00	292.59	0.00	0.00	0.00	0.00								
3500.87	0.00	0.00	3474.00	0.00	336.15	2.00	180.00	0.00	0.00								
6637.91	0.00	0.00	6611.04	0.00	336.15	0.00	0.00	0.00	0.00								
77537.74	89.98	0.33	7184.00	572.78	339.42	10.00	0.33	572.78	0.00								
87649.88	89.98	0.33	7187.00	10684.74	397.18	0.00	0.00	10684.74	PBHL_GEE 27N-12HZ(460 FNL 1175 FEL)								
DESIGN TARGET DETAILS																	
Name		TVD		+N/-S		+E/-W		Northing		Easting		Latitude		Longitude		Shape	
PBHL		7187.00		10684.74		397.18		1301164.88		3186173.78		40.1581730		-104.8339070		Point	
- plan hits target center																	
FORMATION TOP DETAILS																	
TVDPath				MDPath				Formation				DipDirInc					
917.00				917.00				Fox Hills Base				0.00					
3906.00				3932.87				Parkman				0.00					
4323.00				4349.87				Sussex				0.00					
7050.00				7137.99				Sharon Springs				50.01					
7118.00				7260.20				Niobrara A				62.23					
7152.00				7345.53				Niobrara B				70.76					





Scientific Drilling

US ROCKIES REGION PLANNING

COLORADO NORTHERN ZONE - 83

GEE 17-24HZ PAD

GEE 27N-12HZ

OH

Plan: PLAN #1 PRELIMINARY

Standard Planning Report

26 June, 2014

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well GEE 27N-12HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4858 & KB 17 @ 4875.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4858 & KB 17 @ 4875.00ft (ASSUMED)
Site:	GEE 17-24HZ PAD	North Reference:	True
Well:	GEE 27N-12HZ	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	GEE 17-24HZ PAD, SECTION 24 T2N R67W			
Site Position:		Northing:	1,290,419.46 usft	Latitude: 40.1286830
From:	Lat/Long	Easting:	3,185,841.48 usft	Longitude: -104.8353840
Position Uncertainty:	0.00 ft	Slot Radius:	13.200 in	Grid Convergence: 0.43 °

Well	GEE 27N-12HZ, 684 FNL 1510 FEL			
Well Position	+N/-S	57.90 ft	Northing:	1,290,477.47 usft
	+E/-W	15.66 ft	Easting:	3,185,856.71 usft
Position Uncertainty	0.00 ft	Wellhead Elevation:	0.00 ft	Ground Level: 4,858.00 ft

Wellbore	OH				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2013	06/11/14	8.52	66.70	52,580

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	0.00

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	
1,067.00	0.00	0.00	1,067.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,567.23	10.00	90.00	1,564.70	0.00	43.56	2.00	2.00	0.00	90.00	
3,000.64	10.00	90.00	2,976.30	0.00	292.59	0.00	0.00	0.00	0.00	
3,500.87	0.00	0.00	3,474.00	0.00	336.15	2.00	-2.00	0.00	180.00	
6,637.91	0.00	0.00	6,611.04	0.00	336.15	0.00	0.00	0.00	0.00	
7,537.74	89.98	0.33	7,184.00	572.78	339.42	10.00	10.00	0.04	0.33	
17,649.88	89.98	0.33	7,187.00	10,684.75	397.18	0.00	0.00	0.00	0.00	PBHL_GEE 27N-12H

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well GEE 27N-12HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4858 & KB 17 @ 4875.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4858 & KB 17 @ 4875.00ft (ASSUMED)
Site:	GEE 17-24HZ PAD	North Reference:	True
Well:	GEE 27N-12HZ	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
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
917.00	0.00	0.00	917.00	0.00	0.00	0.00	0.00	0.00	0.00
Fox Hills Base									
967.00	0.00	0.00	967.00	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
1,067.00	0.00	0.00	1,067.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 2.00									
1,100.00	0.66	90.00	1,100.00	0.00	0.19	0.00	2.00	2.00	0.00
1,200.00	2.66	90.00	1,199.95	0.00	3.09	0.00	2.00	2.00	0.00
1,300.00	4.66	90.00	1,299.74	0.00	9.47	0.00	2.00	2.00	0.00
1,400.00	6.66	90.00	1,399.25	0.00	19.33	0.00	2.00	2.00	0.00
1,500.00	8.66	90.00	1,498.35	0.00	32.66	0.00	2.00	2.00	0.00
1,567.23	10.00	90.00	1,564.70	0.00	43.56	0.00	2.00	2.00	0.00
Start 1433.41 hold at 1567.23 MD									
1,600.00	10.00	90.00	1,596.96	0.00	49.26	0.00	0.00	0.00	0.00
1,700.00	10.00	90.00	1,695.44	0.00	66.63	0.00	0.00	0.00	0.00
1,800.00	10.00	90.00	1,793.92	0.00	84.00	0.00	0.00	0.00	0.00
1,900.00	10.00	90.00	1,892.40	0.00	101.37	0.00	0.00	0.00	0.00
2,000.00	10.00	90.00	1,990.88	0.00	118.75	0.00	0.00	0.00	0.00
2,100.00	10.00	90.00	2,089.36	0.00	136.12	0.00	0.00	0.00	0.00
2,200.00	10.00	90.00	2,187.84	0.00	153.49	0.00	0.00	0.00	0.00
2,300.00	10.00	90.00	2,286.32	0.00	170.87	0.00	0.00	0.00	0.00
2,400.00	10.00	90.00	2,384.80	0.00	188.24	0.00	0.00	0.00	0.00
2,500.00	10.00	90.00	2,483.28	0.00	205.61	0.00	0.00	0.00	0.00
2,600.00	10.00	90.00	2,581.76	0.00	222.98	0.00	0.00	0.00	0.00
2,700.00	10.00	90.00	2,680.24	0.00	240.36	0.00	0.00	0.00	0.00
2,800.00	10.00	90.00	2,778.72	0.00	257.73	0.00	0.00	0.00	0.00
2,900.00	10.00	90.00	2,877.20	0.00	275.10	0.00	0.00	0.00	0.00
3,000.00	10.00	90.00	2,975.67	0.00	292.48	0.00	0.00	0.00	0.00
3,000.64	10.00	90.00	2,976.30	0.00	292.59	0.00	0.00	0.00	0.00
Start Drop -2.00									
3,100.00	8.02	90.00	3,074.43	0.00	308.15	0.00	2.00	-2.00	0.00
3,200.00	6.02	90.00	3,173.68	0.00	320.36	0.00	2.00	-2.00	0.00
3,300.00	4.02	90.00	3,273.29	0.00	329.11	0.00	2.00	-2.00	0.00
3,400.00	2.02	90.00	3,373.15	0.00	334.37	0.00	2.00	-2.00	0.00
3,500.00	0.02	90.00	3,473.13	0.00	336.15	0.00	2.00	-2.00	0.00
3,500.87	0.00	0.00	3,474.00	0.00	336.15	0.00	2.00	-2.00	0.00
Start 3137.04 hold at 3500.87 MD									
3,600.00	0.00	0.00	3,573.13	0.00	336.15	0.00	0.00	0.00	0.00
3,700.00	0.00	0.00	3,673.13	0.00	336.15	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,773.13	0.00	336.15	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,873.13	0.00	336.15	0.00	0.00	0.00	0.00
3,932.87	0.00	0.00	3,906.00	0.00	336.15	0.00	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well GEE 27N-12HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4858 & KB 17 @ 4875.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4858 & KB 17 @ 4875.00ft (ASSUMED)
Site:	GEE 17-24HZ PAD	North Reference:	True
Well:	GEE 27N-12HZ	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)
Parkman									
4,000.00	0.00	0.00	3,973.13	0.00	336.15	0.00	0.00	0.00	0.00
4,100.00	0.00	0.00	4,073.13	0.00	336.15	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,173.13	0.00	336.15	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,273.13	0.00	336.15	0.00	0.00	0.00	0.00
4,349.87	0.00	0.00	4,323.00	0.00	336.15	0.00	0.00	0.00	0.00
Sussex									
4,400.00	0.00	0.00	4,373.13	0.00	336.15	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,473.13	0.00	336.15	0.00	0.00	0.00	0.00
4,600.00	0.00	0.00	4,573.13	0.00	336.15	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,673.13	0.00	336.15	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,773.13	0.00	336.15	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,873.13	0.00	336.15	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	4,973.13	0.00	336.15	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,073.13	0.00	336.15	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,173.13	0.00	336.15	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,273.13	0.00	336.15	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,373.13	0.00	336.15	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,473.13	0.00	336.15	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,573.13	0.00	336.15	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,673.13	0.00	336.15	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,773.13	0.00	336.15	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,873.13	0.00	336.15	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	5,973.13	0.00	336.15	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,073.13	0.00	336.15	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,173.13	0.00	336.15	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,273.13	0.00	336.15	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,373.13	0.00	336.15	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,473.13	0.00	336.15	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,573.13	0.00	336.15	0.00	0.00	0.00	0.00
6,637.91	0.00	0.00	6,611.04	0.00	336.15	0.00	0.00	0.00	0.00
Start DLS 10.00 TFO 0.33									
6,700.00	6.21	0.33	6,673.01	3.36	336.17	3.36	10.00	10.00	0.00
6,800.00	16.21	0.33	6,770.97	22.77	336.28	22.77	10.00	10.00	0.00
6,900.00	26.21	0.33	6,864.08	58.90	336.49	58.90	10.00	10.00	0.00
7,000.00	36.21	0.33	6,949.50	110.65	336.78	110.65	10.00	10.00	0.00
7,100.00	46.21	0.33	7,024.64	176.45	337.16	176.45	10.00	10.00	0.00
7,137.99	50.01	0.33	7,050.00	204.72	337.32	204.72	10.00	10.00	0.00
Sharon Springs									
7,200.00	56.21	0.33	7,087.21	254.29	337.60	254.29	10.00	10.00	0.00
7,260.20	62.23	0.33	7,118.00	305.98	337.90	305.98	10.00	10.00	0.00
Niobrara A									
7,300.00	66.21	0.33	7,135.31	341.82	338.10	341.82	10.00	10.00	0.00
7,345.53	70.76	0.33	7,152.00	384.16	338.34	384.16	10.00	10.00	0.00
Niobrara B									
7,400.00	76.21	0.33	7,167.48	436.37	338.64	436.37	10.00	10.00	0.00
7,500.00	86.21	0.33	7,182.74	535.06	339.21	535.06	10.00	10.00	0.00
7,537.74	89.98	0.33	7,184.00	572.78	339.42	572.78	10.00	10.00	0.00
Start 10112.13 hold at 7537.74 MD - 7"(119 FNL 1175 FEL)									
7,600.00	89.98	0.33	7,184.02	635.03	339.78	635.03	0.00	0.00	0.00
7,700.00	89.98	0.33	7,184.05	735.03	340.35	735.03	0.00	0.00	0.00
7,800.00	89.98	0.33	7,184.08	835.03	340.92	835.03	0.00	0.00	0.00
7,900.00	89.98	0.33	7,184.11	935.03	341.49	935.03	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well GEE 27N-12HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4858 & KB 17 @ 4875.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4858 & KB 17 @ 4875.00ft (ASSUMED)
Site:	GEE 17-24HZ PAD	North Reference:	True
Well:	GEE 27N-12HZ	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)
8,000.00	89.98	0.33	7,184.14	1,035.03	342.06	1,035.03	0.00	0.00	0.00
8,100.00	89.98	0.33	7,184.16	1,135.03	342.63	1,135.03	0.00	0.00	0.00
8,200.00	89.98	0.33	7,184.19	1,235.02	343.20	1,235.02	0.00	0.00	0.00
8,300.00	89.98	0.33	7,184.22	1,335.02	343.77	1,335.02	0.00	0.00	0.00
8,400.00	89.98	0.33	7,184.25	1,435.02	344.35	1,435.02	0.00	0.00	0.00
8,500.00	89.98	0.33	7,184.28	1,535.02	344.92	1,535.02	0.00	0.00	0.00
8,600.00	89.98	0.33	7,184.31	1,635.02	345.49	1,635.02	0.00	0.00	0.00
8,700.00	89.98	0.33	7,184.34	1,735.02	346.06	1,735.02	0.00	0.00	0.00
8,800.00	89.98	0.33	7,184.37	1,835.01	346.63	1,835.01	0.00	0.00	0.00
8,900.00	89.98	0.33	7,184.40	1,935.01	347.20	1,935.01	0.00	0.00	0.00
9,000.00	89.98	0.33	7,184.43	2,035.01	347.77	2,035.01	0.00	0.00	0.00
9,100.00	89.98	0.33	7,184.46	2,135.01	348.34	2,135.01	0.00	0.00	0.00
9,200.00	89.98	0.33	7,184.49	2,235.01	348.92	2,235.01	0.00	0.00	0.00
9,300.00	89.98	0.33	7,184.52	2,335.01	349.49	2,335.01	0.00	0.00	0.00
9,400.00	89.98	0.33	7,184.55	2,435.00	350.06	2,435.00	0.00	0.00	0.00
9,500.00	89.98	0.33	7,184.58	2,535.00	350.63	2,535.00	0.00	0.00	0.00
9,600.00	89.98	0.33	7,184.61	2,635.00	351.20	2,635.00	0.00	0.00	0.00
9,700.00	89.98	0.33	7,184.64	2,735.00	351.77	2,735.00	0.00	0.00	0.00
9,800.00	89.98	0.33	7,184.67	2,835.00	352.34	2,835.00	0.00	0.00	0.00
9,900.00	89.98	0.33	7,184.70	2,935.00	352.91	2,935.00	0.00	0.00	0.00
10,000.00	89.98	0.33	7,184.73	3,034.99	353.48	3,034.99	0.00	0.00	0.00
10,100.00	89.98	0.33	7,184.76	3,134.99	354.06	3,134.99	0.00	0.00	0.00
10,200.00	89.98	0.33	7,184.79	3,234.99	354.63	3,234.99	0.00	0.00	0.00
10,300.00	89.98	0.33	7,184.82	3,334.99	355.20	3,334.99	0.00	0.00	0.00
10,400.00	89.98	0.33	7,184.85	3,434.99	355.77	3,434.99	0.00	0.00	0.00
10,500.00	89.98	0.33	7,184.88	3,534.99	356.34	3,534.99	0.00	0.00	0.00
10,600.00	89.98	0.33	7,184.91	3,634.99	356.91	3,634.99	0.00	0.00	0.00
10,700.00	89.98	0.33	7,184.94	3,734.98	357.48	3,734.98	0.00	0.00	0.00
10,800.00	89.98	0.33	7,184.97	3,834.98	358.05	3,834.98	0.00	0.00	0.00
10,900.00	89.98	0.33	7,185.00	3,934.98	358.62	3,934.98	0.00	0.00	0.00
11,000.00	89.98	0.33	7,185.03	4,034.98	359.20	4,034.98	0.00	0.00	0.00
11,100.00	89.98	0.33	7,185.06	4,134.98	359.77	4,134.98	0.00	0.00	0.00
11,200.00	89.98	0.33	7,185.09	4,234.98	360.34	4,234.98	0.00	0.00	0.00
11,300.00	89.98	0.33	7,185.11	4,334.97	360.91	4,334.97	0.00	0.00	0.00
11,400.00	89.98	0.33	7,185.14	4,434.97	361.48	4,434.97	0.00	0.00	0.00
11,500.00	89.98	0.33	7,185.17	4,534.97	362.05	4,534.97	0.00	0.00	0.00
11,600.00	89.98	0.33	7,185.20	4,634.97	362.62	4,634.97	0.00	0.00	0.00
11,700.00	89.98	0.33	7,185.23	4,734.97	363.19	4,734.97	0.00	0.00	0.00
11,800.00	89.98	0.33	7,185.26	4,834.97	363.76	4,834.97	0.00	0.00	0.00
11,900.00	89.98	0.33	7,185.29	4,934.96	364.34	4,934.96	0.00	0.00	0.00
12,000.00	89.98	0.33	7,185.32	5,034.96	364.91	5,034.96	0.00	0.00	0.00
12,100.00	89.98	0.33	7,185.35	5,134.96	365.48	5,134.96	0.00	0.00	0.00
12,200.00	89.98	0.33	7,185.38	5,234.96	366.05	5,234.96	0.00	0.00	0.00
12,300.00	89.98	0.33	7,185.41	5,334.96	366.62	5,334.96	0.00	0.00	0.00
12,400.00	89.98	0.33	7,185.44	5,434.96	367.19	5,434.96	0.00	0.00	0.00
12,500.00	89.98	0.33	7,185.47	5,534.95	367.76	5,534.95	0.00	0.00	0.00
12,600.00	89.98	0.33	7,185.50	5,634.95	368.33	5,634.95	0.00	0.00	0.00
12,700.00	89.98	0.33	7,185.53	5,734.95	368.91	5,734.95	0.00	0.00	0.00
12,800.00	89.98	0.33	7,185.56	5,834.95	369.48	5,834.95	0.00	0.00	0.00
12,900.00	89.98	0.33	7,185.59	5,934.95	370.05	5,934.95	0.00	0.00	0.00
13,000.00	89.98	0.33	7,185.62	6,034.95	370.62	6,034.95	0.00	0.00	0.00
13,100.00	89.98	0.33	7,185.65	6,134.94	371.19	6,134.94	0.00	0.00	0.00
13,200.00	89.98	0.33	7,185.68	6,234.94	371.76	6,234.94	0.00	0.00	0.00
13,300.00	89.98	0.33	7,185.71	6,334.94	372.33	6,334.94	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well GEE 27N-12HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4858 & KB 17 @ 4875.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4858 & KB 17 @ 4875.00ft (ASSUMED)
Site:	GEE 17-24HZ PAD	North Reference:	True
Well:	GEE 27N-12HZ	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)
13,400.00	89.98	0.33	7,185.74	6,434.94	372.90	6,434.94	0.00	0.00	0.00
13,500.00	89.98	0.33	7,185.77	6,534.94	373.47	6,534.94	0.00	0.00	0.00
13,600.00	89.98	0.33	7,185.80	6,634.94	374.05	6,634.94	0.00	0.00	0.00
13,700.00	89.98	0.33	7,185.83	6,734.93	374.62	6,734.93	0.00	0.00	0.00
13,800.00	89.98	0.33	7,185.86	6,834.93	375.19	6,834.93	0.00	0.00	0.00
13,900.00	89.98	0.33	7,185.89	6,934.93	375.76	6,934.93	0.00	0.00	0.00
14,000.00	89.98	0.33	7,185.92	7,034.93	376.33	7,034.93	0.00	0.00	0.00
14,100.00	89.98	0.33	7,185.95	7,134.93	376.90	7,134.93	0.00	0.00	0.00
14,200.00	89.98	0.33	7,185.98	7,234.93	377.47	7,234.93	0.00	0.00	0.00
14,300.00	89.98	0.33	7,186.01	7,334.92	378.04	7,334.92	0.00	0.00	0.00
14,400.00	89.98	0.33	7,186.04	7,434.92	378.61	7,434.92	0.00	0.00	0.00
14,500.00	89.98	0.33	7,186.06	7,534.92	379.19	7,534.92	0.00	0.00	0.00
14,600.00	89.98	0.33	7,186.09	7,634.92	379.76	7,634.92	0.00	0.00	0.00
14,700.00	89.98	0.33	7,186.12	7,734.92	380.33	7,734.92	0.00	0.00	0.00
14,800.00	89.98	0.33	7,186.15	7,834.92	380.90	7,834.92	0.00	0.00	0.00
14,900.00	89.98	0.33	7,186.18	7,934.91	381.47	7,934.91	0.00	0.00	0.00
15,000.00	89.98	0.33	7,186.21	8,034.91	382.04	8,034.91	0.00	0.00	0.00
15,100.00	89.98	0.33	7,186.24	8,134.91	382.61	8,134.91	0.00	0.00	0.00
15,200.00	89.98	0.33	7,186.27	8,234.91	383.18	8,234.91	0.00	0.00	0.00
15,300.00	89.98	0.33	7,186.30	8,334.91	383.75	8,334.91	0.00	0.00	0.00
15,400.00	89.98	0.33	7,186.33	8,434.91	384.33	8,434.91	0.00	0.00	0.00
15,500.00	89.98	0.33	7,186.36	8,534.91	384.90	8,534.91	0.00	0.00	0.00
15,600.00	89.98	0.33	7,186.39	8,634.90	385.47	8,634.90	0.00	0.00	0.00
15,700.00	89.98	0.33	7,186.42	8,734.90	386.04	8,734.90	0.00	0.00	0.00
15,800.00	89.98	0.33	7,186.45	8,834.90	386.61	8,834.90	0.00	0.00	0.00
15,900.00	89.98	0.33	7,186.48	8,934.90	387.18	8,934.90	0.00	0.00	0.00
16,000.00	89.98	0.33	7,186.51	9,034.90	387.75	9,034.90	0.00	0.00	0.00
16,100.00	89.98	0.33	7,186.54	9,134.90	388.32	9,134.90	0.00	0.00	0.00
16,200.00	89.98	0.33	7,186.57	9,234.89	388.89	9,234.89	0.00	0.00	0.00
16,300.00	89.98	0.33	7,186.60	9,334.89	389.47	9,334.89	0.00	0.00	0.00
16,400.00	89.98	0.33	7,186.63	9,434.89	390.04	9,434.89	0.00	0.00	0.00
16,500.00	89.98	0.33	7,186.66	9,534.89	390.61	9,534.89	0.00	0.00	0.00
16,600.00	89.98	0.33	7,186.69	9,634.89	391.18	9,634.89	0.00	0.00	0.00
16,700.00	89.98	0.33	7,186.72	9,734.89	391.75	9,734.89	0.00	0.00	0.00
16,800.00	89.98	0.33	7,186.75	9,834.88	392.32	9,834.88	0.00	0.00	0.00
16,900.00	89.98	0.33	7,186.78	9,934.88	392.89	9,934.88	0.00	0.00	0.00
17,000.00	89.98	0.33	7,186.81	10,034.88	393.46	10,034.88	0.00	0.00	0.00
17,100.00	89.98	0.33	7,186.84	10,134.88	394.04	10,134.88	0.00	0.00	0.00
17,200.00	89.98	0.33	7,186.87	10,234.88	394.61	10,234.88	0.00	0.00	0.00
17,300.00	89.98	0.33	7,186.90	10,334.88	395.18	10,334.88	0.00	0.00	0.00
17,400.00	89.98	0.33	7,186.93	10,434.87	395.75	10,434.87	0.00	0.00	0.00
17,500.00	89.98	0.33	7,186.96	10,534.87	396.32	10,534.87	0.00	0.00	0.00
17,600.00	89.98	0.33	7,186.99	10,634.87	396.89	10,634.87	0.00	0.00	0.00
17,649.88	89.98	0.33	7,187.00	10,684.75	397.18	10,684.75	0.00	0.00	0.00
TD at 17649.88 - PBHL_GEE 27N-12HZ(460 FNL 1175 FEL)									

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well GEE 27N-12HZ
Company:	US ROCKIES REGION PLANNING	TVD Reference:	GL 4858 & KB 17 @ 4875.00ft (ASSUMED)
Project:	COLORADO NORTHERN ZONE - 83	MD Reference:	GL 4858 & KB 17 @ 4875.00ft (ASSUMED)
Site:	GEE 17-24HZ PAD	North Reference:	True
Well:	GEE 27N-12HZ	Survey Calculation Method:	Minimum Curvature
Wellbore:	OH		
Design:	PLAN #1 PRELIMINARY		

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_GEE 27N-12HZ<	0.00	0.00	7,187.00	10,684.75	397.18	1,301,164.87	3,186,173.79	40.1581730	-104.8339070
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
967.00	967.00	9 5/8"	9.625	13.500	
7,537.74	7,184.00	7"(119 FNL 1175 FEL)	7.000	8.750	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
917.00	917.00	Fox Hills Base				
3,932.87	3,906.00	Parkman				
4,349.87	4,323.00	Sussex				
7,137.99	7,050.00	Sharon Springs				
7,260.20	7,118.00	Niobrara A				
7,345.53	7,152.00	Niobrara B				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
1,067.00	1,067.00	0.00	0.00	Start Build 2.00	
1,567.23	1,564.70	0.00	43.56	Start 1433.41 hold at 1567.23 MD	
3,000.64	2,976.30	0.00	292.59	Start Drop -2.00	
3,500.87	3,474.00	0.00	336.15	Start 3137.04 hold at 3500.87 MD	
6,637.91	6,611.04	0.00	336.15	Start DLS 10.00 TFO 0.33	
7,537.74	7,184.00	572.78	339.42	Start 10112.13 hold at 7537.74 MD	
17,649.88	7,187.00	10,684.75	397.18	TD at 17649.88	