

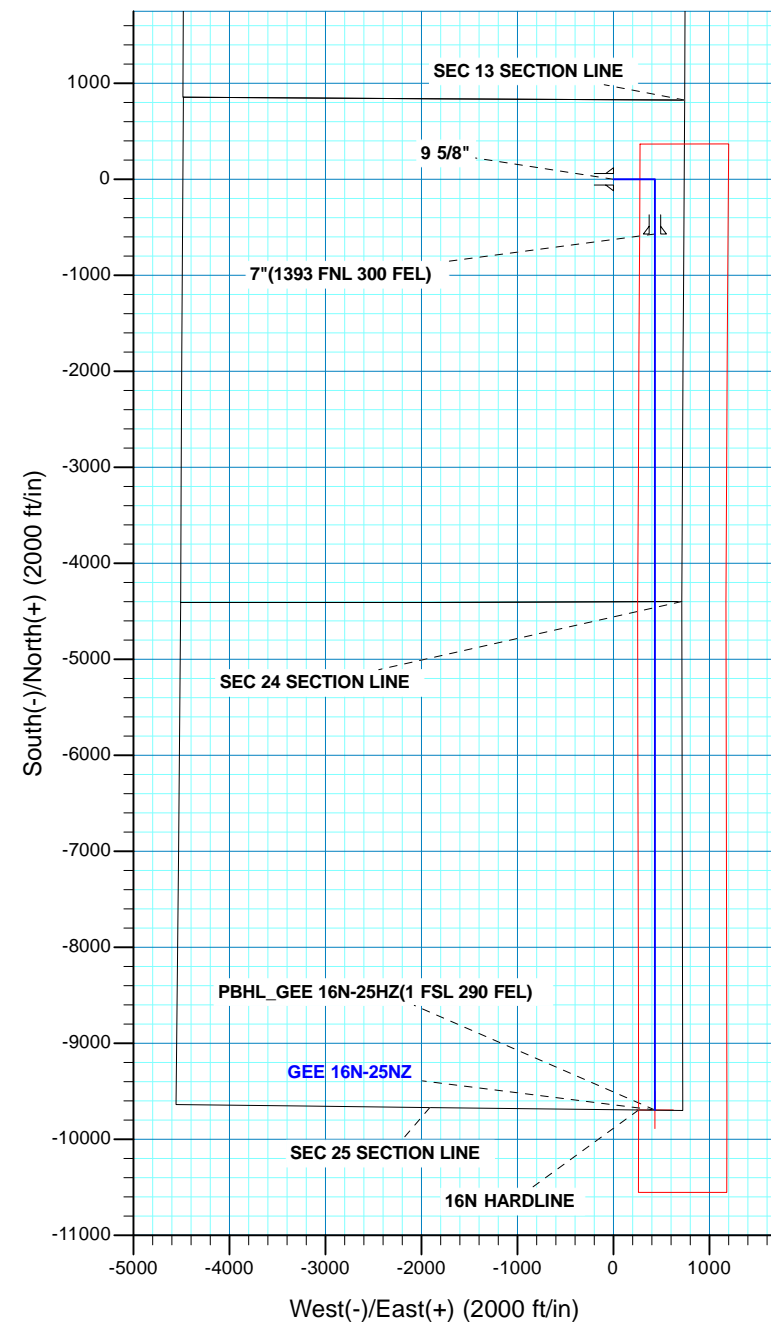
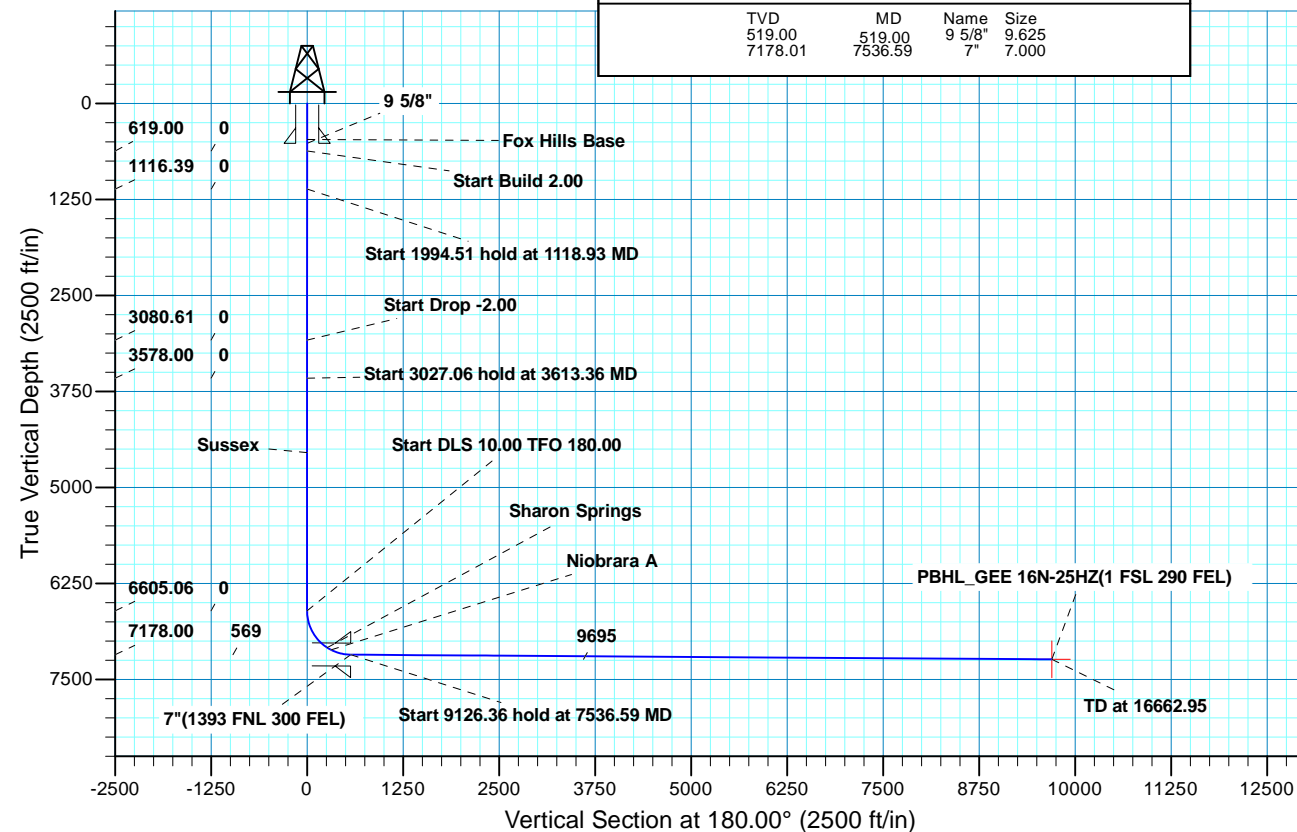


Project: COLORADO NORTHERN ZONE - 83  
 Site: GEE 1-24HZ PAD  
 Well: GEE 16N-25NZ  
 Wellbore: OH  
 Design: PLAN #1 PRELIMINARY



WELL DETAILS: GEE 16N-25NZ											
GL 4858 & KB 17 @ 4875.00ft (ASSUMED)											
+N/-S 0.00		+E/-W 0.00		Northing 1290334.29		Easting 3186629.01		Latitude 40.1284330		Longitude -104.8325700	
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			
619.00	0.00		619.00	0.00	0.00	0.00	0.00	0.00			
1118.93	10.00	90.00	1116.39	0.00	43.51	2.00	90.00	0.00			
3113.43	10.00	90.00	3080.61	0.00	389.80	0.00	0.00	0.00			
3613.36	0.00	0.00	3578.00	0.00	433.31	2.00	180.00	0.00			
6640.42	0.00	0.00	6605.06	0.00	433.31	0.00	0.00	0.00			
7536.59	89.62	180.00	7178.00	-569.13	433.31	10.00	180.00	569.13			
16662.95	89.62	180.00	7239.00	-9695.28	433.31	0.00	0.00	9695.28	PBHL_GEE 16N-25HZ(1 FSL 290 FEL)		
DESIGN TARGET DETAILS											
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Shape			
PBHL	7239.00	-9695.28	433.31	1280642.57	3187135.28	40.1018180	-104.8310210	Point			
- plan hits target center											
FORMATION TOP DETAILS											
	TVDPath	MDPath	Formation	DipAngle	DipDirInc						
	469.00	469.00	Fox Hills Base		0.00						
	4547.00	4582.36	Sussex		0.00						
	7086.00	7211.19	Sharon Springs		57.08						
	7115.00	7269.17	Niobrara A		62.87						
	7148.00	7354.13	Niobrara B		71.37						

CASING DETAILS			
TVD	MD	Name	Size
519.00	519.00	9 5/8"	9.625
7178.01	7536.59	7"	7.000





**Scientific Drilling**

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**GEE 1-24HZ PAD**

**GEE 16N-25NZ**

**OH**

**Plan: PLAN #1 PRELIMINARY**

## **Standard Planning Report**

**12 June, 2014**

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GEE 16N-25NZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4858 & KB 17 @ 4875.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4858 & KB 17 @ 4875.00ft (ASSUMED)
<b>Site:</b>	GEE 1-24HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	GEE 16N-25NZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

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

<b>Site</b>	GEE 1-24HZ PAD, SECTION 24 T2N R67W			
<b>Site Position:</b>		<b>Northing:</b>	1,290,363.14 usft	<b>Latitude:</b> 40.1285120
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,186,636.63 usft	<b>Longitude:</b> -104.8325420
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> 0.43 °

<b>Well</b>	GEE 16N-25NZ, 829 FNL 738 FEL			
<b>Well Position</b>	<b>+N/-S</b>	-28.79 ft	<b>Northing:</b>	1,290,334.29 usft
	<b>+E/-W</b>	-7.83 ft	<b>Easting:</b>	3,186,629.01 usft
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b>	0.00 ft	<b>Ground Level:</b> 4,858.00 ft

<b>Wellbore</b>	OH				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	BGGM2013	06/12/14	8.52	66.70	52,580

<b>Design</b>	PLAN #1 PRELIMINARY			
<b>Audit Notes:</b>				
<b>Version:</b>	<b>Phase:</b>	PLAN	<b>Tie On Depth:</b>	0.00
<b>Vertical Section:</b>	<b>Depth From (TVD) (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>
	0.00	0.00	0.00	180.00

<b>Plan Sections</b>										
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	
619.00	0.00	0.00	619.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,118.93	10.00	90.00	1,116.39	0.00	43.51	2.00	2.00	0.00	90.00	
3,113.43	10.00	90.00	3,080.61	0.00	389.80	0.00	0.00	0.00	0.00	
3,613.36	0.00	0.00	3,578.00	0.00	433.31	2.00	-2.00	0.00	180.00	
6,640.42	0.00	0.00	6,605.06	0.00	433.31	0.00	0.00	0.00	0.00	
7,536.59	89.62	180.00	7,178.01	-569.13	433.31	10.00	10.00	20.09	180.00	
16,662.95	89.62	180.00	7,239.00	-9,695.28	433.31	0.00	0.00	0.00	0.00	PBHL_GEE 16N-25H

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GEE 16N-25NZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4858 & KB 17 @ 4875.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4858 & KB 17 @ 4875.00ft (ASSUMED)
<b>Site:</b>	GEE 1-24HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	GEE 16N-25NZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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
469.00	0.00	0.00	469.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Fox Hills Base</b>									
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
519.00	0.00	0.00	519.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>9 5/8"</b>									
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
619.00	0.00	0.00	619.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
700.00	1.62	90.00	699.99	0.00	1.15	0.00	2.00	2.00	0.00
800.00	3.62	90.00	799.88	0.00	5.72	0.00	2.00	2.00	0.00
900.00	5.62	90.00	899.55	0.00	13.77	0.00	2.00	2.00	0.00
1,000.00	7.62	90.00	998.88	0.00	25.30	0.00	2.00	2.00	0.00
1,100.00	9.62	90.00	1,097.74	0.00	40.29	0.00	2.00	2.00	0.00
1,118.93	10.00	90.00	1,116.39	0.00	43.51	0.00	2.00	2.00	0.00
<b>Start 1994.51 hold at 1118.93 MD</b>									
1,200.00	10.00	90.00	1,196.24	0.00	57.59	0.00	0.00	0.00	0.00
1,300.00	10.00	90.00	1,294.72	0.00	74.95	0.00	0.00	0.00	0.00
1,400.00	10.00	90.00	1,393.20	0.00	92.31	0.00	0.00	0.00	0.00
1,500.00	10.00	90.00	1,491.68	0.00	109.67	0.00	0.00	0.00	0.00
1,600.00	10.00	90.00	1,590.16	0.00	127.04	0.00	0.00	0.00	0.00
1,700.00	10.00	90.00	1,688.64	0.00	144.40	0.00	0.00	0.00	0.00
1,800.00	10.00	90.00	1,787.12	0.00	161.76	0.00	0.00	0.00	0.00
1,900.00	10.00	90.00	1,885.60	0.00	179.12	0.00	0.00	0.00	0.00
2,000.00	10.00	90.00	1,984.09	0.00	196.48	0.00	0.00	0.00	0.00
2,100.00	10.00	90.00	2,082.57	0.00	213.85	0.00	0.00	0.00	0.00
2,200.00	10.00	90.00	2,181.05	0.00	231.21	0.00	0.00	0.00	0.00
2,300.00	10.00	90.00	2,279.53	0.00	248.57	0.00	0.00	0.00	0.00
2,400.00	10.00	90.00	2,378.01	0.00	265.93	0.00	0.00	0.00	0.00
2,500.00	10.00	90.00	2,476.49	0.00	283.30	0.00	0.00	0.00	0.00
2,600.00	10.00	90.00	2,574.97	0.00	300.66	0.00	0.00	0.00	0.00
2,700.00	10.00	90.00	2,673.45	0.00	318.02	0.00	0.00	0.00	0.00
2,800.00	10.00	90.00	2,771.93	0.00	335.38	0.00	0.00	0.00	0.00
2,900.00	10.00	90.00	2,870.42	0.00	352.74	0.00	0.00	0.00	0.00
3,000.00	10.00	90.00	2,968.90	0.00	370.11	0.00	0.00	0.00	0.00
3,100.00	10.00	90.00	3,067.38	0.00	387.47	0.00	0.00	0.00	0.00
3,113.43	10.00	90.00	3,080.61	0.00	389.80	0.00	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
3,200.00	8.27	90.00	3,166.07	0.00	403.54	0.00	2.00	-2.00	0.00
3,300.00	6.27	90.00	3,265.27	0.00	416.19	0.00	2.00	-2.00	0.00
3,400.00	4.27	90.00	3,364.84	0.00	425.37	0.00	2.00	-2.00	0.00
3,500.00	2.27	90.00	3,464.67	0.00	431.07	0.00	2.00	-2.00	0.00
3,600.00	0.27	90.00	3,564.64	0.00	433.28	0.00	2.00	-2.00	0.00
3,613.36	0.00	0.00	3,578.00	0.00	433.31	0.00	2.00	-2.00	0.00
<b>Start 3027.06 hold at 3613.36 MD</b>									
3,700.00	0.00	0.00	3,664.64	0.00	433.31	0.00	0.00	0.00	0.00
3,800.00	0.00	0.00	3,764.64	0.00	433.31	0.00	0.00	0.00	0.00
3,900.00	0.00	0.00	3,864.64	0.00	433.31	0.00	0.00	0.00	0.00
4,000.00	0.00	0.00	3,964.64	0.00	433.31	0.00	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GEE 16N-25NZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4858 & KB 17 @ 4875.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4858 & KB 17 @ 4875.00ft (ASSUMED)
<b>Site:</b>	GEE 1-24HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	GEE 16N-25NZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)
4,100.00	0.00	0.00	4,064.64	0.00	433.31	0.00	0.00	0.00	0.00
4,200.00	0.00	0.00	4,164.64	0.00	433.31	0.00	0.00	0.00	0.00
4,300.00	0.00	0.00	4,264.64	0.00	433.31	0.00	0.00	0.00	0.00
4,400.00	0.00	0.00	4,364.64	0.00	433.31	0.00	0.00	0.00	0.00
4,500.00	0.00	0.00	4,464.64	0.00	433.31	0.00	0.00	0.00	0.00
4,582.36	0.00	0.00	4,547.00	0.00	433.31	0.00	0.00	0.00	0.00
<b>Sussex</b>									
4,600.00	0.00	0.00	4,564.64	0.00	433.31	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,664.64	0.00	433.31	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,764.64	0.00	433.31	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,864.64	0.00	433.31	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	4,964.64	0.00	433.31	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,064.64	0.00	433.31	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,164.64	0.00	433.31	0.00	0.00	0.00	0.00
5,300.00	0.00	0.00	5,264.64	0.00	433.31	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,364.64	0.00	433.31	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,464.64	0.00	433.31	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,564.64	0.00	433.31	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,664.64	0.00	433.31	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,764.64	0.00	433.31	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,864.64	0.00	433.31	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	5,964.64	0.00	433.31	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,064.64	0.00	433.31	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,164.64	0.00	433.31	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,264.64	0.00	433.31	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,364.64	0.00	433.31	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,464.64	0.00	433.31	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,564.64	0.00	433.31	0.00	0.00	0.00	0.00
6,640.42	0.00	0.00	6,605.06	0.00	433.31	0.00	0.00	0.00	0.00
<b>Start DLS 10.00 TFO 180.00</b>									
6,700.00	5.96	180.00	6,664.53	-3.10	433.31	3.10	10.00	10.00	0.00
6,800.00	15.96	180.00	6,762.59	-22.08	433.31	22.08	10.00	10.00	0.00
6,900.00	25.96	180.00	6,855.85	-57.80	433.31	57.80	10.00	10.00	0.00
7,000.00	35.96	180.00	6,941.50	-109.18	433.31	109.18	10.00	10.00	0.00
7,100.00	45.96	180.00	7,016.92	-174.65	433.31	174.65	10.00	10.00	0.00
7,200.00	55.96	180.00	7,079.83	-252.22	433.31	252.22	10.00	10.00	0.00
7,211.19	57.08	180.00	7,086.00	-261.55	433.31	261.55	10.00	10.00	0.00
<b>Sharon Springs</b>									
7,269.17	62.87	180.00	7,115.00	-311.73	433.31	311.73	10.00	10.00	0.00
<b>Niobrara A</b>									
7,300.00	65.96	180.00	7,128.31	-339.53	433.31	339.53	10.00	10.00	0.00
7,354.13	71.37	180.00	7,148.00	-389.94	433.31	389.94	10.00	10.00	0.00
<b>Niobrara B</b>									
7,400.00	75.96	180.00	7,160.90	-433.94	433.31	433.94	10.00	10.00	0.00
7,500.00	85.96	180.00	7,176.59	-532.57	433.31	532.57	10.00	10.00	0.00
7,536.59	89.62	180.00	7,178.01	-569.13	433.31	569.13	10.00	10.00	0.00
<b>Start 9126.36 hold at 7536.59 MD - 7"(1393 FNL 300 FEL)</b>									
7,600.00	89.62	180.00	7,178.43	-632.54	433.31	632.54	0.00	0.00	0.00
7,700.00	89.62	180.00	7,179.10	-732.54	433.31	732.54	0.00	0.00	0.00
7,800.00	89.62	180.00	7,179.77	-832.53	433.31	832.53	0.00	0.00	0.00
7,900.00	89.62	180.00	7,180.43	-932.53	433.31	932.53	0.00	0.00	0.00
8,000.00	89.62	180.00	7,181.10	-1,032.53	433.31	1,032.53	0.00	0.00	0.00
8,100.00	89.62	180.00	7,181.77	-1,132.53	433.31	1,132.53	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GEE 16N-25NZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4858 & KB 17 @ 4875.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4858 & KB 17 @ 4875.00ft (ASSUMED)
<b>Site:</b>	GEE 1-24HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	GEE 16N-25NZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)
8,200.00	89.62	180.00	7,182.44	-1,232.52	433.31	1,232.52	0.00	0.00	0.00
8,300.00	89.62	180.00	7,183.11	-1,332.52	433.31	1,332.52	0.00	0.00	0.00
8,400.00	89.62	180.00	7,183.78	-1,432.52	433.31	1,432.52	0.00	0.00	0.00
8,500.00	89.62	180.00	7,184.44	-1,532.52	433.31	1,532.52	0.00	0.00	0.00
8,600.00	89.62	180.00	7,185.11	-1,632.52	433.31	1,632.52	0.00	0.00	0.00
8,700.00	89.62	180.00	7,185.78	-1,732.51	433.31	1,732.51	0.00	0.00	0.00
8,800.00	89.62	180.00	7,186.45	-1,832.51	433.31	1,832.51	0.00	0.00	0.00
8,900.00	89.62	180.00	7,187.12	-1,932.51	433.31	1,932.51	0.00	0.00	0.00
9,000.00	89.62	180.00	7,187.79	-2,032.51	433.31	2,032.51	0.00	0.00	0.00
9,100.00	89.62	180.00	7,188.45	-2,132.50	433.31	2,132.50	0.00	0.00	0.00
9,200.00	89.62	180.00	7,189.12	-2,232.50	433.31	2,232.50	0.00	0.00	0.00
9,300.00	89.62	180.00	7,189.79	-2,332.50	433.31	2,332.50	0.00	0.00	0.00
9,400.00	89.62	180.00	7,190.46	-2,432.50	433.31	2,432.50	0.00	0.00	0.00
9,500.00	89.62	180.00	7,191.13	-2,532.49	433.31	2,532.49	0.00	0.00	0.00
9,600.00	89.62	180.00	7,191.80	-2,632.49	433.31	2,632.49	0.00	0.00	0.00
9,700.00	89.62	180.00	7,192.46	-2,732.49	433.31	2,732.49	0.00	0.00	0.00
9,800.00	89.62	180.00	7,193.13	-2,832.49	433.31	2,832.49	0.00	0.00	0.00
9,900.00	89.62	180.00	7,193.80	-2,932.49	433.31	2,932.49	0.00	0.00	0.00
10,000.00	89.62	180.00	7,194.47	-3,032.48	433.31	3,032.48	0.00	0.00	0.00
10,100.00	89.62	180.00	7,195.14	-3,132.48	433.31	3,132.48	0.00	0.00	0.00
10,200.00	89.62	180.00	7,195.81	-3,232.48	433.31	3,232.48	0.00	0.00	0.00
10,300.00	89.62	180.00	7,196.47	-3,332.48	433.31	3,332.48	0.00	0.00	0.00
10,400.00	89.62	180.00	7,197.14	-3,432.47	433.31	3,432.47	0.00	0.00	0.00
10,500.00	89.62	180.00	7,197.81	-3,532.47	433.31	3,532.47	0.00	0.00	0.00
10,600.00	89.62	180.00	7,198.48	-3,632.47	433.31	3,632.47	0.00	0.00	0.00
10,700.00	89.62	180.00	7,199.15	-3,732.47	433.31	3,732.47	0.00	0.00	0.00
10,800.00	89.62	180.00	7,199.82	-3,832.47	433.31	3,832.47	0.00	0.00	0.00
10,900.00	89.62	180.00	7,200.48	-3,932.46	433.31	3,932.46	0.00	0.00	0.00
11,000.00	89.62	180.00	7,201.15	-4,032.46	433.31	4,032.46	0.00	0.00	0.00
11,100.00	89.62	180.00	7,201.82	-4,132.46	433.31	4,132.46	0.00	0.00	0.00
11,200.00	89.62	180.00	7,202.49	-4,232.46	433.31	4,232.46	0.00	0.00	0.00
11,300.00	89.62	180.00	7,203.16	-4,332.45	433.31	4,332.45	0.00	0.00	0.00
11,400.00	89.62	180.00	7,203.83	-4,432.45	433.31	4,432.45	0.00	0.00	0.00
11,500.00	89.62	180.00	7,204.49	-4,532.45	433.31	4,532.45	0.00	0.00	0.00
11,600.00	89.62	180.00	7,205.16	-4,632.45	433.31	4,632.45	0.00	0.00	0.00
11,700.00	89.62	180.00	7,205.83	-4,732.45	433.31	4,732.45	0.00	0.00	0.00
11,800.00	89.62	180.00	7,206.50	-4,832.44	433.31	4,832.44	0.00	0.00	0.00
11,900.00	89.62	180.00	7,207.17	-4,932.44	433.31	4,932.44	0.00	0.00	0.00
12,000.00	89.62	180.00	7,207.84	-5,032.44	433.31	5,032.44	0.00	0.00	0.00
12,100.00	89.62	180.00	7,208.50	-5,132.44	433.31	5,132.44	0.00	0.00	0.00
12,200.00	89.62	180.00	7,209.17	-5,232.43	433.31	5,232.43	0.00	0.00	0.00
12,300.00	89.62	180.00	7,209.84	-5,332.43	433.31	5,332.43	0.00	0.00	0.00
12,400.00	89.62	180.00	7,210.51	-5,432.43	433.31	5,432.43	0.00	0.00	0.00
12,500.00	89.62	180.00	7,211.18	-5,532.43	433.31	5,532.43	0.00	0.00	0.00
12,600.00	89.62	180.00	7,211.85	-5,632.43	433.31	5,632.43	0.00	0.00	0.00
12,700.00	89.62	180.00	7,212.51	-5,732.42	433.31	5,732.42	0.00	0.00	0.00
12,800.00	89.62	180.00	7,213.18	-5,832.42	433.31	5,832.42	0.00	0.00	0.00
12,900.00	89.62	180.00	7,213.85	-5,932.42	433.31	5,932.42	0.00	0.00	0.00
13,000.00	89.62	180.00	7,214.52	-6,032.42	433.31	6,032.42	0.00	0.00	0.00
13,100.00	89.62	180.00	7,215.19	-6,132.41	433.31	6,132.41	0.00	0.00	0.00
13,200.00	89.62	180.00	7,215.86	-6,232.41	433.31	6,232.41	0.00	0.00	0.00
13,300.00	89.62	180.00	7,216.52	-6,332.41	433.31	6,332.41	0.00	0.00	0.00
13,400.00	89.62	180.00	7,217.19	-6,432.41	433.31	6,432.41	0.00	0.00	0.00
13,500.00	89.62	180.00	7,217.86	-6,532.41	433.31	6,532.41	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GEE 16N-25NZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4858 & KB 17 @ 4875.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4858 & KB 17 @ 4875.00ft (ASSUMED)
<b>Site:</b>	GEE 1-24HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	GEE 16N-25NZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	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)
13,600.00	89.62	180.00	7,218.53	-6,632.40	433.31	6,632.40	0.00	0.00	0.00
13,700.00	89.62	180.00	7,219.20	-6,732.40	433.31	6,732.40	0.00	0.00	0.00
13,800.00	89.62	180.00	7,219.87	-6,832.40	433.31	6,832.40	0.00	0.00	0.00
13,900.00	89.62	180.00	7,220.53	-6,932.40	433.31	6,932.40	0.00	0.00	0.00
14,000.00	89.62	180.00	7,221.20	-7,032.39	433.31	7,032.39	0.00	0.00	0.00
14,100.00	89.62	180.00	7,221.87	-7,132.39	433.31	7,132.39	0.00	0.00	0.00
14,200.00	89.62	180.00	7,222.54	-7,232.39	433.31	7,232.39	0.00	0.00	0.00
14,300.00	89.62	180.00	7,223.21	-7,332.39	433.31	7,332.39	0.00	0.00	0.00
14,400.00	89.62	180.00	7,223.88	-7,432.39	433.31	7,432.39	0.00	0.00	0.00
14,500.00	89.62	180.00	7,224.54	-7,532.38	433.31	7,532.38	0.00	0.00	0.00
14,600.00	89.62	180.00	7,225.21	-7,632.38	433.31	7,632.38	0.00	0.00	0.00
14,700.00	89.62	180.00	7,225.88	-7,732.38	433.31	7,732.38	0.00	0.00	0.00
14,800.00	89.62	180.00	7,226.55	-7,832.38	433.31	7,832.38	0.00	0.00	0.00
14,900.00	89.62	180.00	7,227.22	-7,932.37	433.31	7,932.37	0.00	0.00	0.00
15,000.00	89.62	180.00	7,227.89	-8,032.37	433.31	8,032.37	0.00	0.00	0.00
15,100.00	89.62	180.00	7,228.55	-8,132.37	433.31	8,132.37	0.00	0.00	0.00
15,200.00	89.62	180.00	7,229.22	-8,232.37	433.31	8,232.37	0.00	0.00	0.00
15,300.00	89.62	180.00	7,229.89	-8,332.37	433.31	8,332.37	0.00	0.00	0.00
15,400.00	89.62	180.00	7,230.56	-8,432.36	433.31	8,432.36	0.00	0.00	0.00
15,500.00	89.62	180.00	7,231.23	-8,532.36	433.31	8,532.36	0.00	0.00	0.00
15,600.00	89.62	180.00	7,231.90	-8,632.36	433.31	8,632.36	0.00	0.00	0.00
15,700.00	89.62	180.00	7,232.56	-8,732.36	433.31	8,732.36	0.00	0.00	0.00
15,800.00	89.62	180.00	7,233.23	-8,832.35	433.31	8,832.35	0.00	0.00	0.00
15,900.00	89.62	180.00	7,233.90	-8,932.35	433.31	8,932.35	0.00	0.00	0.00
16,000.00	89.62	180.00	7,234.57	-9,032.35	433.31	9,032.35	0.00	0.00	0.00
16,100.00	89.62	180.00	7,235.24	-9,132.35	433.31	9,132.35	0.00	0.00	0.00
16,200.00	89.62	180.00	7,235.91	-9,232.35	433.31	9,232.35	0.00	0.00	0.00
16,300.00	89.62	180.00	7,236.57	-9,332.34	433.31	9,332.34	0.00	0.00	0.00
16,400.00	89.62	180.00	7,237.24	-9,432.34	433.31	9,432.34	0.00	0.00	0.00
16,500.00	89.62	180.00	7,237.91	-9,532.34	433.31	9,532.34	0.00	0.00	0.00
16,600.00	89.62	180.00	7,238.58	-9,632.34	433.31	9,632.34	0.00	0.00	0.00
16,662.95	89.62	180.00	7,239.00	-9,695.28	433.31	9,695.28	0.00	0.00	0.00
TD at 16662.95 - PBHL_GEE 16N-25HZ(1 FSL 290 FEL)									

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 16N-25HZ(	0.00	0.00	7,239.00	-9,695.28	433.31	1,280,642.56	3,187,135.28	40.1018180	-104.8310210
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
519.00	519.00	9 5/8"	9.625	13.500	
7,536.59	7,178.01	7"(1393 FNL 300 FEL)	7.000	8.750	

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GEE 16N-25NZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4858 & KB 17 @ 4875.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4858 & KB 17 @ 4875.00ft (ASSUMED)
<b>Site:</b>	GEE 1-24HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	GEE 16N-25NZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
469.00	469.00	Fox Hills Base			
4,582.36	4,547.00	Sussex			
7,211.19	7,086.00	Sharon Springs			
7,269.17	7,115.00	Niobrara A			
7,354.13	7,148.00	Niobrara B			

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
619.00	619.00	0.00	0.00	Start Build 2.00
1,118.93	1,116.39	0.00	43.51	Start 1994.51 hold at 1118.93 MD
3,113.43	3,080.61	0.00	389.80	Start Drop -2.00
3,613.36	3,578.00	0.00	433.31	Start 3027.06 hold at 3613.36 MD
6,640.42	6,605.06	0.00	433.31	Start DLS 10.00 TFO 180.00
7,536.59	7,178.01	-569.13	433.31	Start 9126.36 hold at 7536.59 MD
16,662.95	7,239.00	-9,695.28	433.31	TD at 16662.95