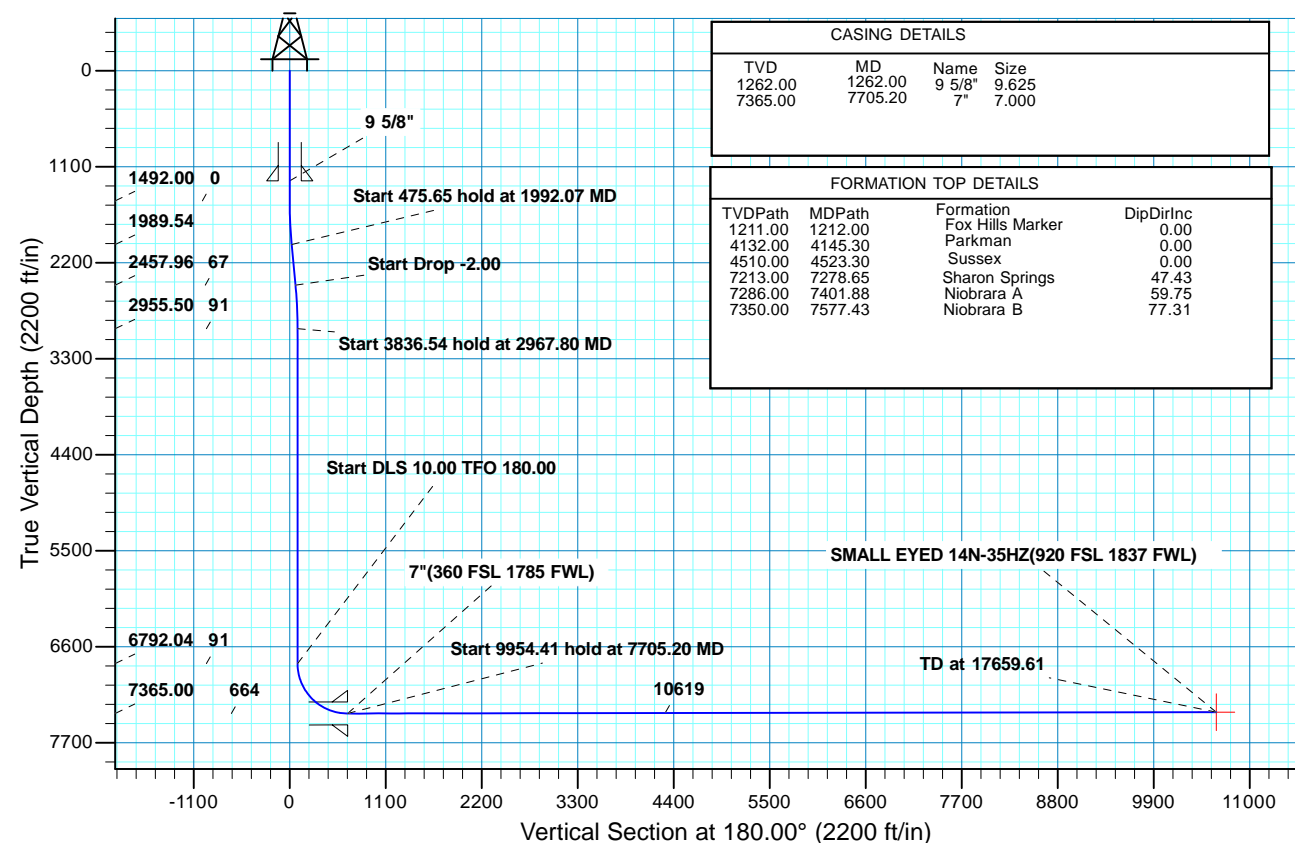


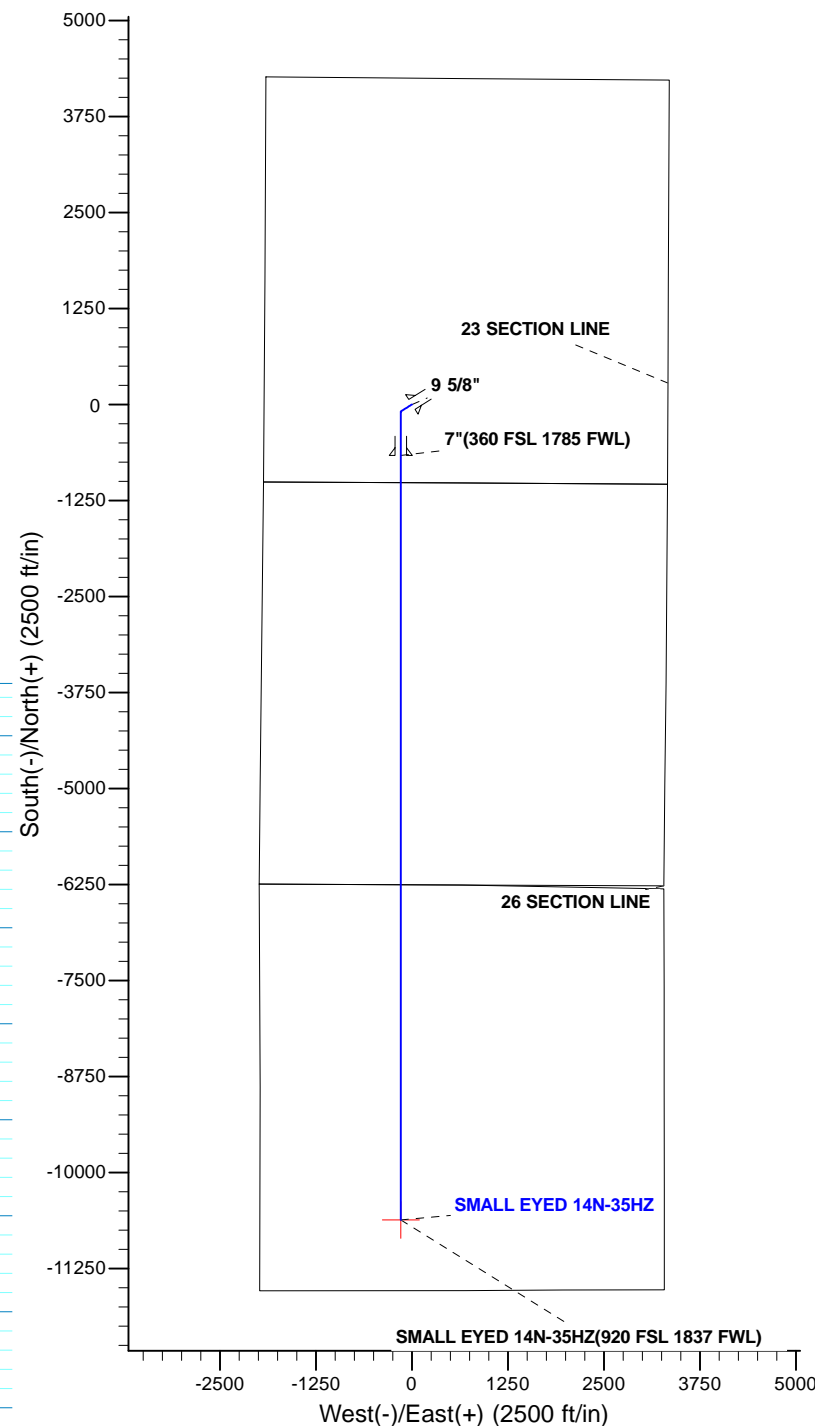
WELL DETAILS: SMALL EYED 14N-35HZ									
GL 4962 & KB 17 @ 4980.00ft (ASSUMED)									
+N/-S 0.00		+E/-W 0.00		Northing 1286907.80	Easting 3178819.79	Latitude 40.1191850		Longitude -104.8605850	
SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1492.00	0.00	0.00	1492.00	0.00	0.00	0.00	0.00	0.00	
1992.07	10.00	237.77	1989.54	-23.22	-36.83	2.00	237.77	23.22	
2467.73	10.00	237.77	2457.96	-67.28	-106.70	0.00	0.00	67.28	
2967.80	0.00	0.00	2955.50	-90.50	-143.53	2.00	180.00	90.50	
6804.34	0.00	0.00	6792.04	-90.50	-143.53	0.00	0.00	90.50	
7705.20	90.09	180.00	7365.00	-664.32	-143.53	10.00	180.00	664.32	
17659.61	90.09	180.00	7350.00	-10618.72	-143.53	0.00	0.00	0618.72	SMALL EYED 14N-35HZ(920 FSL 1837 FWL)



CASING DETAILS			
TVD	MD	Name	Size
1262.00	1262.00	9 5/8"	9.625
7365.00	7705.20	7"	7.000

FORMATION TOP DETAILS			
TVDPath	MDPath	Formation	DipDirInc
1211.00	1212.00	Fox Hills Marker	0.00
4132.00	4145.30	Parkman	0.00
4510.00	4523.30	Sussex	0.00
7213.00	7278.65	Sharon Springs	47.43
7286.00	7401.88	Niobrara A	59.75
7350.00	7577.43	Niobrara B	77.31





Scientific Drilling

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**SMALL EYED 23-23HZ**

**SMALL EYED 14N-35HZ**

**OH**

**Plan: PLAN #1 PRELIMINARY**

## **Standard Planning Report**

**18 February, 2014**

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SMALL EYED 14N-35HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4962 & KB 17 @ 4980.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4962 & KB 17 @ 4980.00ft (ASSUMED)
<b>Site:</b>	SMALL EYED 23-23HZ	<b>North Reference:</b>	True
<b>Well:</b>	SMALL EYED 14N-35HZ	<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>	SMALL EYED 23-23HZ, SECTION 23 T2N R67W			
<b>Site Position:</b>		<b>Northing:</b>	1,286,907.66 usft	<b>Latitude:</b> 40.1191840
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,178,849.72 usft	<b>Longitude:</b> -104.8604780
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> 0.41 °

<b>Well</b>	SMALL EYED 14N-35HZ, 1020' FSL 1925' FWL			
<b>Well Position</b>	<b>+N/-S</b>	0.36 ft	<b>Northing:</b>	1,286,907.80 usft
	<b>+E/-W</b>	-29.92 ft	<b>Easting:</b>	3,178,819.79 usft
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	0.00 ft
			<b>Ground Level:</b>	4,963.00 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	02/13/14	8.57	66.70	52,612

<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	
1,492.00	0.00	0.00	1,492.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,992.07	10.00	237.77	1,989.54	-23.22	-36.83	2.00	2.00	0.00	237.77	
2,467.73	10.00	237.77	2,457.96	-67.28	-106.70	0.00	0.00	0.00	0.00	
2,967.80	0.00	0.00	2,955.50	-90.50	-143.53	2.00	-2.00	0.00	180.00	
6,804.34	0.00	0.00	6,792.04	-90.50	-143.53	0.00	0.00	0.00	0.00	
7,705.20	90.09	180.00	7,365.00	-664.32	-143.53	10.00	10.00	19.98	180.00	
17,659.62	90.09	180.00	7,350.00	-10,618.72	-143.53	0.00	0.00	0.00	0.00	SMALL EYED 14N-35

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SMALL EYED 14N-35HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4962 & KB 17 @ 4980.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4962 & KB 17 @ 4980.00ft (ASSUMED)
<b>Site:</b>	SMALL EYED 23-23HZ	<b>North Reference:</b>	True
<b>Well:</b>	SMALL EYED 14N-35HZ	<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
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
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
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,212.00	0.00	0.00	1,212.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Fox Hills Marker</b>									
1,262.00	0.00	0.00	1,262.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>9 5/8"</b>									
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,492.00	0.00	0.00	1,492.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
1,500.00	0.16	237.77	1,500.00	-0.01	-0.01	0.01	2.00	2.00	0.00
1,600.00	2.16	237.77	1,599.97	-1.09	-1.72	1.09	2.00	2.00	0.00
1,700.00	4.16	237.77	1,699.82	-4.03	-6.38	4.03	2.00	2.00	0.00
1,800.00	6.16	237.77	1,799.41	-8.82	-13.99	8.82	2.00	2.00	0.00
1,900.00	8.16	237.77	1,898.62	-15.47	-24.53	15.47	2.00	2.00	0.00
1,992.07	10.00	237.77	1,989.54	-23.22	-36.83	23.22	2.00	2.00	0.00
<b>Start 475.65 hold at 1992.07 MD</b>									
2,000.00	10.00	237.77	1,997.34	-23.95	-37.99	23.95	0.00	0.00	0.00
2,100.00	10.00	237.77	2,095.82	-33.22	-52.68	33.22	0.00	0.00	0.00
2,200.00	10.00	237.77	2,194.30	-42.48	-67.37	42.48	0.00	0.00	0.00
2,300.00	10.00	237.77	2,292.78	-51.74	-82.06	51.74	0.00	0.00	0.00
2,400.00	10.00	237.77	2,391.27	-61.01	-96.75	61.01	0.00	0.00	0.00
2,467.73	10.00	237.77	2,457.96	-67.28	-106.70	67.28	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
2,500.00	9.36	237.77	2,489.78	-70.17	-111.29	70.17	2.00	-2.00	0.00
2,600.00	7.36	237.77	2,588.71	-77.92	-123.59	77.92	2.00	-2.00	0.00
2,700.00	5.36	237.77	2,688.09	-83.83	-132.95	83.83	2.00	-2.00	0.00
2,800.00	3.36	237.77	2,787.80	-87.88	-139.37	87.88	2.00	-2.00	0.00
2,900.00	1.36	237.77	2,887.71	-90.07	-142.85	90.07	2.00	-2.00	0.00
2,967.80	0.00	0.00	2,955.50	-90.50	-143.53	90.50	2.00	-2.00	0.00
<b>Start 3836.54 hold at 2967.80 MD</b>									
3,000.00	0.00	0.00	2,987.70	-90.50	-143.53	90.50	0.00	0.00	0.00
3,100.00	0.00	0.00	3,087.70	-90.50	-143.53	90.50	0.00	0.00	0.00
3,200.00	0.00	0.00	3,187.70	-90.50	-143.53	90.50	0.00	0.00	0.00
3,300.00	0.00	0.00	3,287.70	-90.50	-143.53	90.50	0.00	0.00	0.00
3,400.00	0.00	0.00	3,387.70	-90.50	-143.53	90.50	0.00	0.00	0.00
3,500.00	0.00	0.00	3,487.70	-90.50	-143.53	90.50	0.00	0.00	0.00
3,600.00	0.00	0.00	3,587.70	-90.50	-143.53	90.50	0.00	0.00	0.00
3,700.00	0.00	0.00	3,687.70	-90.50	-143.53	90.50	0.00	0.00	0.00
3,800.00	0.00	0.00	3,787.70	-90.50	-143.53	90.50	0.00	0.00	0.00
3,900.00	0.00	0.00	3,887.70	-90.50	-143.53	90.50	0.00	0.00	0.00
4,000.00	0.00	0.00	3,987.70	-90.50	-143.53	90.50	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SMALL EYED 14N-35HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4962 & KB 17 @ 4980.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4962 & KB 17 @ 4980.00ft (ASSUMED)
<b>Site:</b>	SMALL EYED 23-23HZ	<b>North Reference:</b>	True
<b>Well:</b>	SMALL EYED 14N-35HZ	<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	4,087.70	-90.50	-143.53	90.50	0.00	0.00	0.00
4,145.30	0.00	0.00	4,133.00	-90.50	-143.53	90.50	0.00	0.00	0.00
<b>Parkman</b>									
4,200.00	0.00	0.00	4,187.70	-90.50	-143.53	90.50	0.00	0.00	0.00
4,300.00	0.00	0.00	4,287.70	-90.50	-143.53	90.50	0.00	0.00	0.00
4,400.00	0.00	0.00	4,387.70	-90.50	-143.53	90.50	0.00	0.00	0.00
4,500.00	0.00	0.00	4,487.70	-90.50	-143.53	90.50	0.00	0.00	0.00
4,523.30	0.00	0.00	4,511.00	-90.50	-143.53	90.50	0.00	0.00	0.00
<b>Sussex</b>									
4,600.00	0.00	0.00	4,587.70	-90.50	-143.53	90.50	0.00	0.00	0.00
4,700.00	0.00	0.00	4,687.70	-90.50	-143.53	90.50	0.00	0.00	0.00
4,800.00	0.00	0.00	4,787.70	-90.50	-143.53	90.50	0.00	0.00	0.00
4,900.00	0.00	0.00	4,887.70	-90.50	-143.53	90.50	0.00	0.00	0.00
5,000.00	0.00	0.00	4,987.70	-90.50	-143.53	90.50	0.00	0.00	0.00
5,100.00	0.00	0.00	5,087.70	-90.50	-143.53	90.50	0.00	0.00	0.00
5,200.00	0.00	0.00	5,187.70	-90.50	-143.53	90.50	0.00	0.00	0.00
5,300.00	0.00	0.00	5,287.70	-90.50	-143.53	90.50	0.00	0.00	0.00
5,400.00	0.00	0.00	5,387.70	-90.50	-143.53	90.50	0.00	0.00	0.00
5,500.00	0.00	0.00	5,487.70	-90.50	-143.53	90.50	0.00	0.00	0.00
5,600.00	0.00	0.00	5,587.70	-90.50	-143.53	90.50	0.00	0.00	0.00
5,700.00	0.00	0.00	5,687.70	-90.50	-143.53	90.50	0.00	0.00	0.00
5,800.00	0.00	0.00	5,787.70	-90.50	-143.53	90.50	0.00	0.00	0.00
5,900.00	0.00	0.00	5,887.70	-90.50	-143.53	90.50	0.00	0.00	0.00
6,000.00	0.00	0.00	5,987.70	-90.50	-143.53	90.50	0.00	0.00	0.00
6,100.00	0.00	0.00	6,087.70	-90.50	-143.53	90.50	0.00	0.00	0.00
6,200.00	0.00	0.00	6,187.70	-90.50	-143.53	90.50	0.00	0.00	0.00
6,300.00	0.00	0.00	6,287.70	-90.50	-143.53	90.50	0.00	0.00	0.00
6,400.00	0.00	0.00	6,387.70	-90.50	-143.53	90.50	0.00	0.00	0.00
6,500.00	0.00	0.00	6,487.70	-90.50	-143.53	90.50	0.00	0.00	0.00
6,600.00	0.00	0.00	6,587.70	-90.50	-143.53	90.50	0.00	0.00	0.00
6,700.00	0.00	0.00	6,687.70	-90.50	-143.53	90.50	0.00	0.00	0.00
6,800.00	0.00	0.00	6,787.70	-90.50	-143.53	90.50	0.00	0.00	0.00
6,804.34	0.00	0.00	6,792.04	-90.50	-143.53	90.50	0.00	0.00	0.00
<b>Start DLS 10.00 TFO 180.00</b>									
6,900.00	9.57	180.00	6,887.26	-98.47	-143.53	98.47	10.00	10.00	0.00
7,000.00	19.57	180.00	6,983.92	-123.58	-143.53	123.58	10.00	10.00	0.00
7,100.00	29.57	180.00	7,074.75	-165.11	-143.53	165.11	10.00	10.00	0.00
7,200.00	39.57	180.00	7,157.00	-221.77	-143.53	221.77	10.00	10.00	0.00
7,278.65	47.43	180.00	7,214.00	-275.86	-143.53	275.86	10.00	10.00	0.00
<b>Sharon Springs</b>									
7,300.00	49.57	180.00	7,228.15	-291.85	-143.53	291.85	10.00	10.00	0.00
7,400.00	59.57	180.00	7,286.05	-373.23	-143.53	373.23	10.00	10.00	0.00
7,401.88	59.75	180.00	7,287.00	-374.85	-143.53	374.85	10.00	10.00	0.00
<b>Niobrara A</b>									
7,500.00	69.57	180.00	7,328.94	-463.42	-143.53	463.42	10.00	10.00	0.00
7,577.43	77.31	180.00	7,351.00	-537.58	-143.53	537.58	10.00	10.00	0.00
<b>Niobrara B</b>									
7,600.00	79.57	180.00	7,355.52	-559.69	-143.53	559.69	10.00	10.00	0.00
7,700.00	89.57	180.00	7,364.98	-659.12	-143.53	659.12	10.00	10.00	0.00
7,705.20	90.09	180.00	7,365.00	-664.32	-143.53	664.32	10.00	10.00	0.00
<b>Start 9954.41 hold at 7705.20 MD - 7"(360 FSL 1785 FWL)</b>									
7,800.00	90.09	180.00	7,364.85	-759.12	-143.53	759.12	0.00	0.00	0.00
7,900.00	90.09	180.00	7,364.70	-859.12	-143.53	859.12	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SMALL EYED 14N-35HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4962 & KB 17 @ 4980.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4962 & KB 17 @ 4980.00ft (ASSUMED)
<b>Site:</b>	SMALL EYED 23-23HZ	<b>North Reference:</b>	True
<b>Well:</b>	SMALL EYED 14N-35HZ	<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)	
8,000.00	90.09	180.00	7,364.55	-959.12	-143.53	959.12	0.00	0.00	0.00	
8,100.00	90.09	180.00	7,364.40	-1,059.12	-143.53	1,059.12	0.00	0.00	0.00	
8,200.00	90.09	180.00	7,364.25	-1,159.12	-143.53	1,159.12	0.00	0.00	0.00	
8,300.00	90.09	180.00	7,364.10	-1,259.12	-143.53	1,259.12	0.00	0.00	0.00	
8,400.00	90.09	180.00	7,363.95	-1,359.12	-143.53	1,359.12	0.00	0.00	0.00	
8,500.00	90.09	180.00	7,363.80	-1,459.12	-143.53	1,459.12	0.00	0.00	0.00	
8,600.00	90.09	180.00	7,363.65	-1,559.12	-143.53	1,559.12	0.00	0.00	0.00	
8,700.00	90.09	180.00	7,363.50	-1,659.12	-143.53	1,659.12	0.00	0.00	0.00	
8,800.00	90.09	180.00	7,363.35	-1,759.12	-143.53	1,759.12	0.00	0.00	0.00	
8,900.00	90.09	180.00	7,363.20	-1,859.12	-143.53	1,859.12	0.00	0.00	0.00	
9,000.00	90.09	180.00	7,363.05	-1,959.12	-143.53	1,959.12	0.00	0.00	0.00	
9,100.00	90.09	180.00	7,362.90	-2,059.12	-143.53	2,059.12	0.00	0.00	0.00	
9,200.00	90.09	180.00	7,362.75	-2,159.12	-143.53	2,159.12	0.00	0.00	0.00	
9,300.00	90.09	180.00	7,362.59	-2,259.12	-143.53	2,259.12	0.00	0.00	0.00	
9,400.00	90.09	180.00	7,362.44	-2,359.12	-143.53	2,359.12	0.00	0.00	0.00	
9,500.00	90.09	180.00	7,362.29	-2,459.12	-143.53	2,459.12	0.00	0.00	0.00	
9,600.00	90.09	180.00	7,362.14	-2,559.12	-143.53	2,559.12	0.00	0.00	0.00	
9,700.00	90.09	180.00	7,361.99	-2,659.12	-143.53	2,659.12	0.00	0.00	0.00	
9,800.00	90.09	180.00	7,361.84	-2,759.12	-143.53	2,759.12	0.00	0.00	0.00	
9,900.00	90.09	180.00	7,361.69	-2,859.12	-143.53	2,859.12	0.00	0.00	0.00	
10,000.00	90.09	180.00	7,361.54	-2,959.12	-143.53	2,959.12	0.00	0.00	0.00	
10,100.00	90.09	180.00	7,361.39	-3,059.12	-143.53	3,059.12	0.00	0.00	0.00	
10,200.00	90.09	180.00	7,361.24	-3,159.12	-143.53	3,159.12	0.00	0.00	0.00	
10,300.00	90.09	180.00	7,361.09	-3,259.12	-143.53	3,259.12	0.00	0.00	0.00	
10,400.00	90.09	180.00	7,360.94	-3,359.11	-143.53	3,359.11	0.00	0.00	0.00	
10,500.00	90.09	180.00	7,360.79	-3,459.11	-143.53	3,459.11	0.00	0.00	0.00	
10,600.00	90.09	180.00	7,360.64	-3,559.11	-143.53	3,559.11	0.00	0.00	0.00	
10,700.00	90.09	180.00	7,360.49	-3,659.11	-143.53	3,659.11	0.00	0.00	0.00	
10,800.00	90.09	180.00	7,360.33	-3,759.11	-143.53	3,759.11	0.00	0.00	0.00	
10,900.00	90.09	180.00	7,360.18	-3,859.11	-143.53	3,859.11	0.00	0.00	0.00	
11,000.00	90.09	180.00	7,360.03	-3,959.11	-143.53	3,959.11	0.00	0.00	0.00	
11,100.00	90.09	180.00	7,359.88	-4,059.11	-143.53	4,059.11	0.00	0.00	0.00	
11,200.00	90.09	180.00	7,359.73	-4,159.11	-143.53	4,159.11	0.00	0.00	0.00	
11,300.00	90.09	180.00	7,359.58	-4,259.11	-143.53	4,259.11	0.00	0.00	0.00	
11,400.00	90.09	180.00	7,359.43	-4,359.11	-143.53	4,359.11	0.00	0.00	0.00	
11,500.00	90.09	180.00	7,359.28	-4,459.11	-143.53	4,459.11	0.00	0.00	0.00	
11,600.00	90.09	180.00	7,359.13	-4,559.11	-143.53	4,559.11	0.00	0.00	0.00	
11,700.00	90.09	180.00	7,358.98	-4,659.11	-143.53	4,659.11	0.00	0.00	0.00	
11,800.00	90.09	180.00	7,358.83	-4,759.11	-143.53	4,759.11	0.00	0.00	0.00	
11,900.00	90.09	180.00	7,358.68	-4,859.11	-143.53	4,859.11	0.00	0.00	0.00	
12,000.00	90.09	180.00	7,358.53	-4,959.11	-143.53	4,959.11	0.00	0.00	0.00	
12,100.00	90.09	180.00	7,358.38	-5,059.11	-143.53	5,059.11	0.00	0.00	0.00	
12,200.00	90.09	180.00	7,358.23	-5,159.11	-143.53	5,159.11	0.00	0.00	0.00	
12,300.00	90.09	180.00	7,358.07	-5,259.11	-143.53	5,259.11	0.00	0.00	0.00	
12,400.00	90.09	180.00	7,357.92	-5,359.11	-143.53	5,359.11	0.00	0.00	0.00	
12,500.00	90.09	180.00	7,357.77	-5,459.11	-143.53	5,459.11	0.00	0.00	0.00	
12,600.00	90.09	180.00	7,357.62	-5,559.11	-143.53	5,559.11	0.00	0.00	0.00	
12,700.00	90.09	180.00	7,357.47	-5,659.11	-143.53	5,659.11	0.00	0.00	0.00	
12,800.00	90.09	180.00	7,357.32	-5,759.11	-143.53	5,759.11	0.00	0.00	0.00	
12,900.00	90.09	180.00	7,357.17	-5,859.11	-143.53	5,859.11	0.00	0.00	0.00	
13,000.00	90.09	180.00	7,357.02	-5,959.11	-143.53	5,959.11	0.00	0.00	0.00	
13,100.00	90.09	180.00	7,356.87	-6,059.11	-143.53	6,059.11	0.00	0.00	0.00	
13,200.00	90.09	180.00	7,356.72	-6,159.11	-143.53	6,159.11	0.00	0.00	0.00	
13,300.00	90.09	180.00	7,356.57	-6,259.11	-143.53	6,259.11	0.00	0.00	0.00	

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SMALL EYED 14N-35HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4962 & KB 17 @ 4980.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4962 & KB 17 @ 4980.00ft (ASSUMED)
<b>Site:</b>	SMALL EYED 23-23HZ	<b>North Reference:</b>	True
<b>Well:</b>	SMALL EYED 14N-35HZ	<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)
13,400.00	90.09	180.00	7,356.42	-6,359.11	-143.53	6,359.11	0.00	0.00	0.00
13,500.00	90.09	180.00	7,356.27	-6,459.11	-143.53	6,459.11	0.00	0.00	0.00
13,600.00	90.09	180.00	7,356.12	-6,559.11	-143.53	6,559.11	0.00	0.00	0.00
13,700.00	90.09	180.00	7,355.97	-6,659.11	-143.53	6,659.11	0.00	0.00	0.00
13,800.00	90.09	180.00	7,355.81	-6,759.11	-143.53	6,759.11	0.00	0.00	0.00
13,900.00	90.09	180.00	7,355.66	-6,859.11	-143.53	6,859.11	0.00	0.00	0.00
14,000.00	90.09	180.00	7,355.51	-6,959.11	-143.53	6,959.11	0.00	0.00	0.00
14,100.00	90.09	180.00	7,355.36	-7,059.11	-143.53	7,059.11	0.00	0.00	0.00
14,200.00	90.09	180.00	7,355.21	-7,159.11	-143.53	7,159.11	0.00	0.00	0.00
14,300.00	90.09	180.00	7,355.06	-7,259.11	-143.53	7,259.11	0.00	0.00	0.00
14,400.00	90.09	180.00	7,354.91	-7,359.11	-143.53	7,359.11	0.00	0.00	0.00
14,500.00	90.09	180.00	7,354.76	-7,459.11	-143.53	7,459.11	0.00	0.00	0.00
14,600.00	90.09	180.00	7,354.61	-7,559.11	-143.53	7,559.11	0.00	0.00	0.00
14,700.00	90.09	180.00	7,354.46	-7,659.11	-143.53	7,659.11	0.00	0.00	0.00
14,800.00	90.09	180.00	7,354.31	-7,759.11	-143.53	7,759.11	0.00	0.00	0.00
14,900.00	90.09	180.00	7,354.16	-7,859.11	-143.53	7,859.11	0.00	0.00	0.00
15,000.00	90.09	180.00	7,354.01	-7,959.11	-143.53	7,959.11	0.00	0.00	0.00
15,100.00	90.09	180.00	7,353.86	-8,059.11	-143.53	8,059.11	0.00	0.00	0.00
15,200.00	90.09	180.00	7,353.71	-8,159.11	-143.53	8,159.11	0.00	0.00	0.00
15,300.00	90.09	180.00	7,353.56	-8,259.11	-143.53	8,259.11	0.00	0.00	0.00
15,400.00	90.09	180.00	7,353.40	-8,359.11	-143.53	8,359.11	0.00	0.00	0.00
15,500.00	90.09	180.00	7,353.25	-8,459.11	-143.53	8,459.11	0.00	0.00	0.00
15,600.00	90.09	180.00	7,353.10	-8,559.11	-143.53	8,559.11	0.00	0.00	0.00
15,700.00	90.09	180.00	7,352.95	-8,659.11	-143.53	8,659.11	0.00	0.00	0.00
15,800.00	90.09	180.00	7,352.80	-8,759.11	-143.53	8,759.11	0.00	0.00	0.00
15,900.00	90.09	180.00	7,352.65	-8,859.11	-143.53	8,859.11	0.00	0.00	0.00
16,000.00	90.09	180.00	7,352.50	-8,959.11	-143.53	8,959.11	0.00	0.00	0.00
16,100.00	90.09	180.00	7,352.35	-9,059.11	-143.53	9,059.11	0.00	0.00	0.00
16,200.00	90.09	180.00	7,352.20	-9,159.11	-143.53	9,159.11	0.00	0.00	0.00
16,300.00	90.09	180.00	7,352.05	-9,259.11	-143.53	9,259.11	0.00	0.00	0.00
16,400.00	90.09	180.00	7,351.90	-9,359.11	-143.53	9,359.11	0.00	0.00	0.00
16,500.00	90.09	180.00	7,351.75	-9,459.11	-143.53	9,459.11	0.00	0.00	0.00
16,600.00	90.09	180.00	7,351.60	-9,559.11	-143.53	9,559.11	0.00	0.00	0.00
16,700.00	90.09	180.00	7,351.45	-9,659.11	-143.53	9,659.11	0.00	0.00	0.00
16,800.00	90.09	180.00	7,351.30	-9,759.11	-143.53	9,759.11	0.00	0.00	0.00
16,900.00	90.09	180.00	7,351.14	-9,859.11	-143.53	9,859.11	0.00	0.00	0.00
17,000.00	90.09	180.00	7,350.99	-9,959.11	-143.53	9,959.11	0.00	0.00	0.00
17,100.00	90.09	180.00	7,350.84	-10,059.11	-143.53	10,059.11	0.00	0.00	0.00
17,200.00	90.09	180.00	7,350.69	-10,159.11	-143.53	10,159.11	0.00	0.00	0.00
17,300.00	90.09	180.00	7,350.54	-10,259.11	-143.53	10,259.11	0.00	0.00	0.00
17,400.00	90.09	180.00	7,350.39	-10,359.11	-143.53	10,359.11	0.00	0.00	0.00
17,500.00	90.09	180.00	7,350.24	-10,459.11	-143.53	10,459.11	0.00	0.00	0.00
17,600.00	90.09	180.00	7,350.09	-10,559.11	-143.53	10,559.11	0.00	0.00	0.00
17,659.62	90.09	180.00	7,350.00	-10,618.72	-143.53	10,618.72	0.00	0.00	0.00
TD at 17659.61 - SMALL EYED 14N-35HZ(920 FSL 1837 FWL)									

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well SMALL EYED 14N-35HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4962 & KB 17 @ 4980.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4962 & KB 17 @ 4980.00ft (ASSUMED)
<b>Site:</b>	SMALL EYED 23-23HZ	<b>North Reference:</b>	True
<b>Well:</b>	SMALL EYED 14N-35HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

Design Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(usft)	(usft)		
SMALL EYED 14N-35HZ	0.00	0.00	7,350.00	-10,618.72	-143.53	1,276,288.34	3,178,752.84	40.0900350	-104.8610980
- plan hits target center									
- Point									

Casing Points					
	Measured Depth	Vertical Depth		Casing Diameter	Hole Diameter
	(ft)	(ft)	Name	(in)	(in)
	1,262.00	1,262.00	9 5/8"	9.625	12.250
	7,705.20	7,365.00	7"(360 FSL 1785 FWL)	7.000	7.500

Formations						
	Measured Depth	Vertical Depth			Dip	Dip Direction
	(ft)	(ft)	Name	Lithology	(°)	(°)
	1,212.00	1,211.00	Fox Hills Marker			
	4,145.30	4,132.00	Parkman			
	4,523.30	4,510.00	Sussex			
	7,278.65	7,213.00	Sharon Springs			
	7,401.88	7,286.00	Niobrara A			
	7,577.43	7,350.00	Niobrara B			

Plan Annotations					
	Measured Depth	Vertical Depth	Local Coordinates		
	(ft)	(ft)	+N/-S	+E/-W	Comment
	(ft)	(ft)	(ft)	(ft)	
	1,492.00	1,492.00	0.00	0.00	Start Build 2.00
	1,992.07	1,989.54	-23.22	-36.83	Start 475.65 hold at 1992.07 MD
	2,467.73	2,457.96	-67.28	-106.70	Start Drop -2.00
	2,967.80	2,955.50	-90.50	-143.53	Start 3836.54 hold at 2967.80 MD
	6,804.34	6,792.04	-90.50	-143.53	Start DLS 10.00 TFO 180.00
	7,705.20	7,365.00	-664.32	-143.53	Start 9954.41 hold at 7705.20 MD
	17,659.62	7,350.00	-10,618.72	-143.53	TD at 17659.61