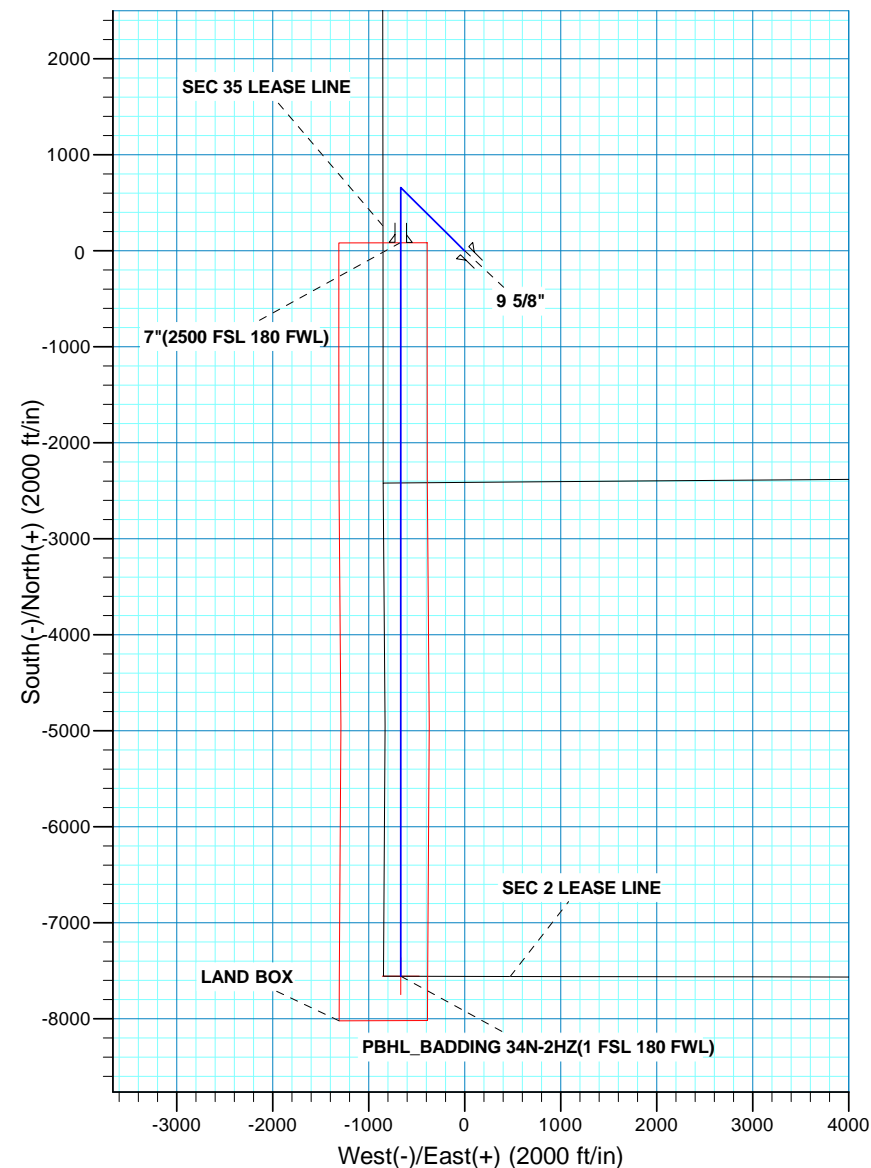
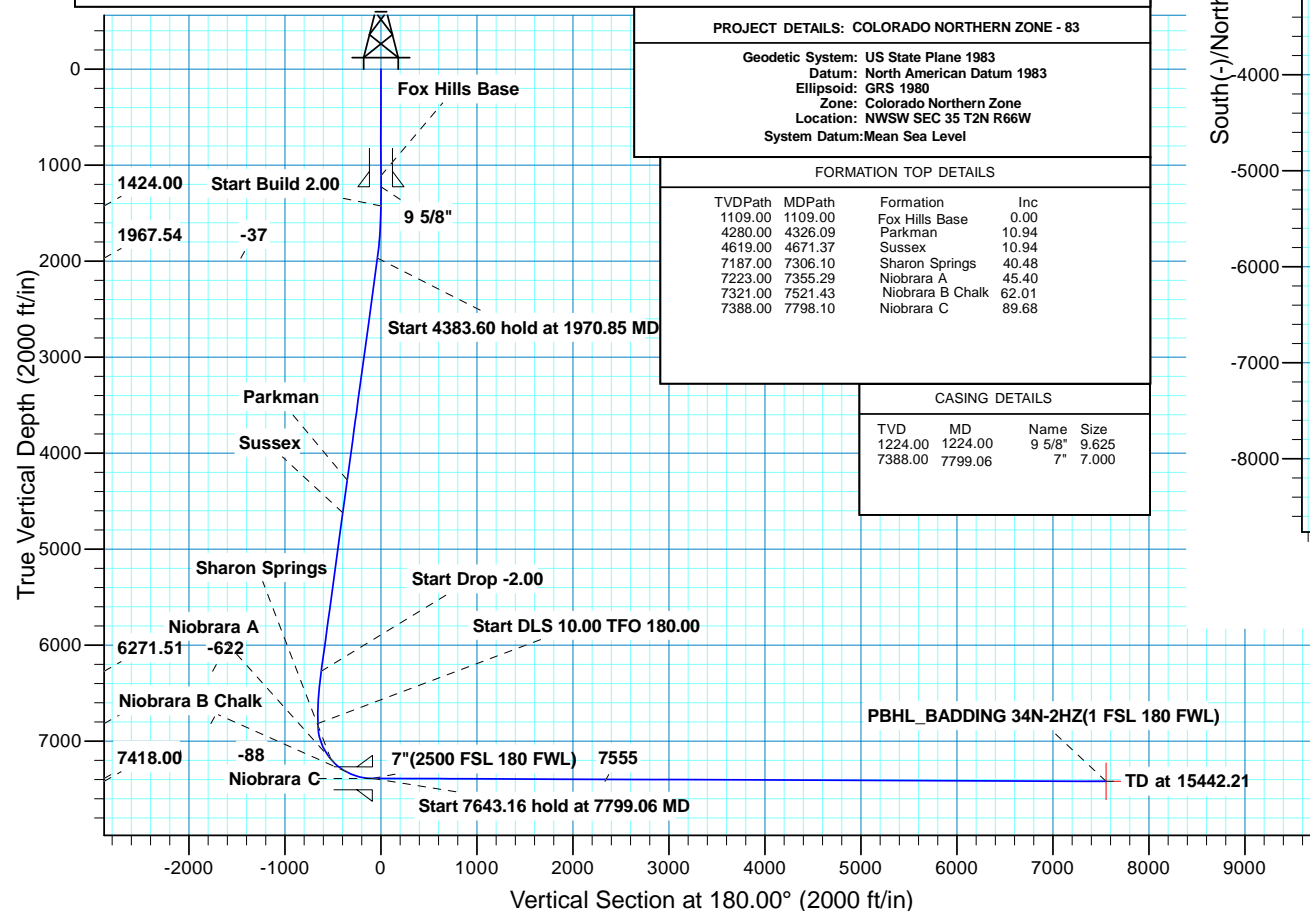


WELL DETAILS: BADDING 34N-2HZ										
GL 5102 & KB 17 @ 5119.00ft (ASSUMED)										
		+N-S 0.00	+E-W 0.00	Northing 1277944.55	Easting 3209629.46	Latitude 40.0939179	Longitude -104.7506930			
SECTION DETAILS										
MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSect	Target	Annotation
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
1424.00	0.00	0.00	1424.00	0.00	0.00	0.00	0.00	0.00		Start Build 2.00
1970.85	10.94	314.74	1967.54	36.63	-36.96	2.00	314.74	-36.63		Start 4383.60 hold at 1970.85 MD
6354.45	10.94	314.74	6271.51	622.08	-627.69	0.00	0.00	-622.08		Start Drop -2.00
6901.30	0.00	0.00	6815.05	658.71	-664.65	2.00	180.00	-658.71		Start DLS 10.00 TFO 180.00
7799.06	89.78	180.00	7388.00	88.00	-664.65	10.00	180.00	-88.00		Start 7643.16 hold at 7799.06 MD
15442.21	89.78	180.00	7418.00	-7555.10	-664.65	0.00	0.00	7555.10	PBHL_BADDING 34N-2HZ	TD at 15442.21
DESIGN TARGET DETAILS										
Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Shape		
PBHL	7418.00	-7555.10	-664.65	1270384.12	3209028.67	40.0731780	-104.7530680	Point		
- plan hits target center										





**Scientific Drilling**

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**BADDING 11-35HZ PAD**

**BADDING 34N-2HZ**

**OH**

**Plan: PLAN #1 PRELIMINARY**

## **Standard Planning Report**

**21 August, 2013**

<b>Database:</b>	Denver Sales	<b>Local Co-ordinate Reference:</b>	Well BADDING 34N-2HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5102 & KB 17 @ 5119.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 5102 & KB 17 @ 5119.00ft (ASSUMED)
<b>Site:</b>	BADDING 11-35HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	BADDING 34N-2HZ	<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>	BADDING 11-35HZ PAD, NWSW SEC 35 T2N R66W			
<b>Site Position:</b>		<b>Northing:</b>	1,277,944.82 usft	<b>Latitude:</b> 40.0939180
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,209,659.39 usft	<b>Longitude:</b> -104.7505860
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> 0.48 °

<b>Well</b>	BADDING 34N-2HZ, 2412 FSL 851 FWL			
<b>Well Position</b>	<b>+N/-S</b>	-0.02 ft	<b>Northing:</b>	1,277,944.55 usft
	<b>+E/-W</b>	-29.94 ft	<b>Easting:</b>	3,209,629.46 usft
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	0.00 ft
			<b>Ground Level:</b>	5,102.00 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	8/14/2013	8.57	66.72	52,671

<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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,424.00	0.00	0.00	1,424.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,970.85	10.94	314.74	1,967.54	36.63	-36.96	2.00	2.00	0.00	314.74	
6,354.45	10.94	314.74	6,271.51	622.08	-627.69	0.00	0.00	0.00	0.00	
6,901.30	0.00	0.00	6,815.05	658.71	-664.65	2.00	-2.00	0.00	180.00	
7,799.06	89.78	180.00	7,388.00	88.00	-664.65	10.00	10.00	-20.05	180.00	
15,442.21	89.78	180.00	7,418.00	-7,555.10	-664.65	0.00	0.00	0.00	0.00	PBHL_BADDING 34N

<b>Database:</b>	Denver Sales	<b>Local Co-ordinate Reference:</b>	Well BADDING 34N-2HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5102 & KB 17 @ 5119.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 5102 & KB 17 @ 5119.00ft (ASSUMED)
<b>Site:</b>	BADDING 11-35HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	BADDING 34N-2HZ	<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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
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
1,109.00	0.00	0.00	1,109.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Fox Hills Base</b>									
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,224.00	0.00	0.00	1,224.00	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
1,424.00	0.00	0.00	1,424.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
1,500.00	1.52	314.74	1,499.99	0.71	-0.72	-0.71	2.00	2.00	0.00
1,600.00	3.52	314.74	1,599.89	3.80	-3.84	-3.80	2.00	2.00	0.00
1,700.00	5.52	314.74	1,699.57	9.35	-9.44	-9.35	2.00	2.00	0.00
1,800.00	7.52	314.74	1,798.92	17.34	-17.50	-17.34	2.00	2.00	0.00
1,900.00	9.52	314.74	1,897.81	27.77	-28.02	-27.77	2.00	2.00	0.00
1,970.85	10.94	314.74	1,967.54	36.63	-36.96	-36.63	2.00	2.00	0.00
<b>Start 4383.60 hold at 1970.85 MD</b>									
2,000.00	10.94	314.74	1,996.16	40.52	-40.89	-40.52	0.00	0.00	0.00
2,100.00	10.94	314.74	2,094.34	53.88	-54.36	-53.88	0.00	0.00	0.00
2,200.00	10.94	314.74	2,192.52	67.23	-67.84	-67.23	0.00	0.00	0.00
2,300.00	10.94	314.74	2,290.71	80.59	-81.32	-80.59	0.00	0.00	0.00
2,400.00	10.94	314.74	2,388.89	93.94	-94.79	-93.94	0.00	0.00	0.00
2,500.00	10.94	314.74	2,487.07	107.30	-108.27	-107.30	0.00	0.00	0.00
2,600.00	10.94	314.74	2,585.26	120.65	-121.74	-120.65	0.00	0.00	0.00
2,700.00	10.94	314.74	2,683.44	134.01	-135.22	-134.01	0.00	0.00	0.00
2,800.00	10.94	314.74	2,781.62	147.37	-148.70	-147.37	0.00	0.00	0.00
2,900.00	10.94	314.74	2,879.81	160.72	-162.17	-160.72	0.00	0.00	0.00
3,000.00	10.94	314.74	2,977.99	174.08	-175.65	-174.08	0.00	0.00	0.00
3,100.00	10.94	314.74	3,076.18	187.43	-189.12	-187.43	0.00	0.00	0.00
3,200.00	10.94	314.74	3,174.36	200.79	-202.60	-200.79	0.00	0.00	0.00
3,300.00	10.94	314.74	3,272.54	214.14	-216.08	-214.14	0.00	0.00	0.00
3,400.00	10.94	314.74	3,370.73	227.50	-229.55	-227.50	0.00	0.00	0.00
3,500.00	10.94	314.74	3,468.91	240.85	-243.03	-240.85	0.00	0.00	0.00
3,600.00	10.94	314.74	3,567.09	254.21	-256.50	-254.21	0.00	0.00	0.00
3,700.00	10.94	314.74	3,665.28	267.57	-269.98	-267.57	0.00	0.00	0.00
3,800.00	10.94	314.74	3,763.46	280.92	-283.46	-280.92	0.00	0.00	0.00
3,900.00	10.94	314.74	3,861.64	294.28	-296.93	-294.28	0.00	0.00	0.00
4,000.00	10.94	314.74	3,959.83	307.63	-310.41	-307.63	0.00	0.00	0.00
4,100.00	10.94	314.74	4,058.01	320.99	-323.88	-320.99	0.00	0.00	0.00
4,200.00	10.94	314.74	4,156.20	334.34	-337.36	-334.34	0.00	0.00	0.00
4,300.00	10.94	314.74	4,254.38	347.70	-350.84	-347.70	0.00	0.00	0.00
4,326.09	10.94	314.74	4,280.00	351.18	-354.35	-351.18	0.00	0.00	0.00
<b>Parkman</b>									

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<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 5102 & KB 17 @ 5119.00ft (ASSUMED)
<b>Site:</b>	BADDING 11-35HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	BADDING 34N-2HZ	<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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,400.00	10.94	314.74	4,352.56	361.05	-364.31	-361.05	0.00	0.00	0.00
4,500.00	10.94	314.74	4,450.75	374.41	-377.79	-374.41	0.00	0.00	0.00
4,600.00	10.94	314.74	4,548.93	387.77	-391.26	-387.77	0.00	0.00	0.00
4,671.37	10.94	314.74	4,619.00	397.30	-400.88	-397.30	0.00	0.00	0.00
<b>Sussex</b>									
4,700.00	10.94	314.74	4,647.11	401.12	-404.74	-401.12	0.00	0.00	0.00
4,800.00	10.94	314.74	4,745.30	414.48	-418.22	-414.48	0.00	0.00	0.00
4,900.00	10.94	314.74	4,843.48	427.83	-431.69	-427.83	0.00	0.00	0.00
5,000.00	10.94	314.74	4,941.66	441.19	-445.17	-441.19	0.00	0.00	0.00
5,100.00	10.94	314.74	5,039.85	454.54	-458.64	-454.54	0.00	0.00	0.00
5,200.00	10.94	314.74	5,138.03	467.90	-472.12	-467.90	0.00	0.00	0.00
5,300.00	10.94	314.74	5,236.22	481.25	-485.60	-481.25	0.00	0.00	0.00
5,400.00	10.94	314.74	5,334.40	494.61	-499.07	-494.61	0.00	0.00	0.00
5,500.00	10.94	314.74	5,432.58	507.96	-512.55	-507.96	0.00	0.00	0.00
5,600.00	10.94	314.74	5,530.77	521.32	-526.02	-521.32	0.00	0.00	0.00
5,700.00	10.94	314.74	5,628.95	534.68	-539.50	-534.68	0.00	0.00	0.00
5,800.00	10.94	314.74	5,727.13	548.03	-552.98	-548.03	0.00	0.00	0.00
5,900.00	10.94	314.74	5,825.32	561.39	-566.45	-561.39	0.00	0.00	0.00
6,000.00	10.94	314.74	5,923.50	574.74	-579.93	-574.74	0.00	0.00	0.00
6,100.00	10.94	314.74	6,021.69	588.10	-593.40	-588.10	0.00	0.00	0.00
6,200.00	10.94	314.74	6,119.87	601.45	-606.88	-601.45	0.00	0.00	0.00
6,300.00	10.94	314.74	6,218.05	614.81	-620.36	-614.81	0.00	0.00	0.00
6,354.45	10.94	314.74	6,271.51	622.08	-627.69	-622.08	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
6,400.00	10.03	314.74	6,316.30	627.91	-633.58	-627.91	2.00	-2.00	0.00
6,500.00	8.03	314.74	6,415.06	638.96	-644.72	-638.96	2.00	-2.00	0.00
6,600.00	6.03	314.74	6,514.30	647.57	-653.41	-647.57	2.00	-2.00	0.00
6,700.00	4.03	314.74	6,613.91	653.73	-659.63	-653.73	2.00	-2.00	0.00
6,800.00	2.03	314.74	6,713.77	657.45	-663.38	-657.45	2.00	-2.00	0.00
6,900.00	0.03	314.74	6,813.75	658.71	-664.65	-658.71	2.00	-2.00	0.00
6,901.30	0.00	0.00	6,815.05	658.71	-664.65	-658.71	2.00	-2.00	0.00
<b>Start DLS 10.00 TFO 180.00</b>									
7,000.00	9.87	180.00	6,913.26	650.23	-664.65	-650.23	10.00	10.00	0.00
7,100.00	19.87	180.00	7,009.79	624.60	-664.65	-624.60	10.00	10.00	0.00
7,200.00	29.87	180.00	7,100.40	582.60	-664.65	-582.60	10.00	10.00	0.00
7,300.00	39.87	180.00	7,182.34	525.50	-664.65	-525.50	10.00	10.00	0.00
7,306.10	40.48	180.00	7,187.00	521.57	-664.65	-521.57	10.00	10.00	0.00
<b>Sharon Springs</b>									
7,355.29	45.40	180.00	7,223.00	488.07	-664.65	-488.07	10.00	10.00	0.00
<b>Niobrara A</b>									
7,400.00	49.87	180.00	7,253.12	455.04	-664.65	-455.04	10.00	10.00	0.00
7,500.00	59.87	180.00	7,310.59	373.36	-664.65	-373.36	10.00	10.00	0.00
7,521.43	62.01	180.00	7,321.00	354.63	-664.65	-354.63	10.00	10.00	0.00
<b>Niobrara B Chalk</b>									
7,600.00	69.87	180.00	7,353.01	282.94	-664.65	-282.94	10.00	10.00	0.00
7,700.00	79.87	180.00	7,379.08	186.53	-664.65	-186.53	10.00	10.00	0.00
7,798.10	89.68	180.00	7,388.00	88.95	-664.65	-88.95	10.00	10.00	0.00
<b>Niobrara C</b>									
7,799.06	89.78	180.00	7,388.00	87.99	-664.65	-87.99	9.95	9.95	0.00
<b>Start 7643.16 hold at 7799.06 MD - 7"(2500 FSL 180 FWL)</b>									
7,800.00	89.78	180.00	7,388.01	87.05	-664.65	-87.05	0.00	0.00	0.00
7,900.00	89.78	180.00	7,388.40	-12.94	-664.65	12.94	0.00	0.00	0.00
8,000.00	89.78	180.00	7,388.79	-112.94	-664.65	112.94	0.00	0.00	0.00

<b>Database:</b>	Denver Sales	<b>Local Co-ordinate Reference:</b>	Well BADDING 34N-2HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5102 & KB 17 @ 5119.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 5102 & KB 17 @ 5119.00ft (ASSUMED)
<b>Site:</b>	BADDING 11-35HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	BADDING 34N-2HZ	<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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,100.00	89.78	180.00	7,389.19	-212.94	-664.65	212.94	0.00	0.00	0.00
8,200.00	89.78	180.00	7,389.58	-312.94	-664.65	312.94	0.00	0.00	0.00
8,300.00	89.78	180.00	7,389.97	-412.94	-664.65	412.94	0.00	0.00	0.00
8,400.00	89.78	180.00	7,390.36	-512.94	-664.65	512.94	0.00	0.00	0.00
8,500.00	89.78	180.00	7,390.76	-612.94	-664.65	612.94	0.00	0.00	0.00
8,600.00	89.78	180.00	7,391.15	-712.94	-664.65	712.94	0.00	0.00	0.00
8,700.00	89.78	180.00	7,391.54	-812.94	-664.65	812.94	0.00	0.00	0.00
8,800.00	89.78	180.00	7,391.93	-912.94	-664.65	912.94	0.00	0.00	0.00
8,900.00	89.78	180.00	7,392.33	-1,012.94	-664.65	1,012.94	0.00	0.00	0.00
9,000.00	89.78	180.00	7,392.72	-1,112.94	-664.65	1,112.94	0.00	0.00	0.00
9,100.00	89.78	180.00	7,393.11	-1,212.94	-664.65	1,212.94	0.00	0.00	0.00
9,200.00	89.78	180.00	7,393.50	-1,312.93	-664.65	1,312.93	0.00	0.00	0.00
9,300.00	89.78	180.00	7,393.90	-1,412.93	-664.65	1,412.93	0.00	0.00	0.00
9,400.00	89.78	180.00	7,394.29	-1,512.93	-664.65	1,512.93	0.00	0.00	0.00
9,500.00	89.78	180.00	7,394.68	-1,612.93	-664.65	1,612.93	0.00	0.00	0.00
9,600.00	89.78	180.00	7,395.07	-1,712.93	-664.65	1,712.93	0.00	0.00	0.00
9,700.00	89.78	180.00	7,395.46	-1,812.93	-664.65	1,812.93	0.00	0.00	0.00
9,800.00	89.78	180.00	7,395.86	-1,912.93	-664.65	1,912.93	0.00	0.00	0.00
9,900.00	89.78	180.00	7,396.25	-2,012.93	-664.65	2,012.93	0.00	0.00	0.00
10,000.00	89.78	180.00	7,396.64	-2,112.93	-664.65	2,112.93	0.00	0.00	0.00
10,100.00	89.78	180.00	7,397.03	-2,212.93	-664.65	2,212.93	0.00	0.00	0.00
10,200.00	89.78	180.00	7,397.43	-2,312.93	-664.65	2,312.93	0.00	0.00	0.00
10,300.00	89.78	180.00	7,397.82	-2,412.93	-664.65	2,412.93	0.00	0.00	0.00
10,400.00	89.78	180.00	7,398.21	-2,512.93	-664.65	2,512.93	0.00	0.00	0.00
10,500.00	89.78	180.00	7,398.60	-2,612.92	-664.65	2,612.92	0.00	0.00	0.00
10,600.00	89.78	180.00	7,399.00	-2,712.92	-664.65	2,712.92	0.00	0.00	0.00
10,700.00	89.78	180.00	7,399.39	-2,812.92	-664.65	2,812.92	0.00	0.00	0.00
10,800.00	89.78	180.00	7,399.78	-2,912.92	-664.65	2,912.92	0.00	0.00	0.00
10,900.00	89.78	180.00	7,400.17	-3,012.92	-664.65	3,012.92	0.00	0.00	0.00
11,000.00	89.78	180.00	7,400.57	-3,112.92	-664.65	3,112.92	0.00	0.00	0.00
11,100.00	89.78	180.00	7,400.96	-3,212.92	-664.65	3,212.92	0.00	0.00	0.00
11,200.00	89.78	180.00	7,401.35	-3,312.92	-664.65	3,312.92	0.00	0.00	0.00
11,300.00	89.78	180.00	7,401.74	-3,412.92	-664.65	3,412.92	0.00	0.00	0.00
11,400.00	89.78	180.00	7,402.14	-3,512.92	-664.65	3,512.92	0.00	0.00	0.00
11,500.00	89.78	180.00	7,402.53	-3,612.92	-664.65	3,612.92	0.00	0.00	0.00
11,600.00	89.78	180.00	7,402.92	-3,712.92	-664.65	3,712.92	0.00	0.00	0.00
11,700.00	89.78	180.00	7,403.31	-3,812.92	-664.65	3,812.92	0.00	0.00	0.00
11,800.00	89.78	180.00	7,403.71	-3,912.91	-664.65	3,912.91	0.00	0.00	0.00
11,900.00	89.78	180.00	7,404.10	-4,012.91	-664.65	4,012.91	0.00	0.00	0.00
12,000.00	89.78	180.00	7,404.49	-4,112.91	-664.65	4,112.91	0.00	0.00	0.00
12,100.00	89.78	180.00	7,404.88	-4,212.91	-664.65	4,212.91	0.00	0.00	0.00
12,200.00	89.78	180.00	7,405.28	-4,312.91	-664.65	4,312.91	0.00	0.00	0.00
12,300.00	89.78	180.00	7,405.67	-4,412.91	-664.65	4,412.91	0.00	0.00	0.00
12,400.00	89.78	180.00	7,406.06	-4,512.91	-664.65	4,512.91	0.00	0.00	0.00
12,500.00	89.78	180.00	7,406.45	-4,612.91	-664.65	4,612.91	0.00	0.00	0.00
12,600.00	89.78	180.00	7,406.85	-4,712.91	-664.65	4,712.91	0.00	0.00	0.00
12,700.00	89.78	180.00	7,407.24	-4,812.91	-664.65	4,812.91	0.00	0.00	0.00
12,800.00	89.78	180.00	7,407.63	-4,912.91	-664.65	4,912.91	0.00	0.00	0.00
12,900.00	89.78	180.00	7,408.02	-5,012.91	-664.65	5,012.91	0.00	0.00	0.00
13,000.00	89.78	180.00	7,408.42	-5,112.91	-664.65	5,112.91	0.00	0.00	0.00
13,100.00	89.78	180.00	7,408.81	-5,212.90	-664.65	5,212.90	0.00	0.00	0.00
13,200.00	89.78	180.00	7,409.20	-5,312.90	-664.65	5,312.90	0.00	0.00	0.00
13,300.00	89.78	180.00	7,409.59	-5,412.90	-664.65	5,412.90	0.00	0.00	0.00
13,400.00	89.78	180.00	7,409.99	-5,512.90	-664.65	5,512.90	0.00	0.00	0.00

<b>Database:</b>	Denver Sales	<b>Local Co-ordinate Reference:</b>	Well BADDING 34N-2HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5102 & KB 17 @ 5119.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 5102 & KB 17 @ 5119.00ft (ASSUMED)
<b>Site:</b>	BADDING 11-35HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	BADDING 34N-2HZ	<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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
13,500.00	89.78	180.00	7,410.38	-5,612.90	-664.65	5,612.90	0.00	0.00	0.00	
13,600.00	89.78	180.00	7,410.77	-5,712.90	-664.65	5,712.90	0.00	0.00	0.00	
13,700.00	89.78	180.00	7,411.16	-5,812.90	-664.65	5,812.90	0.00	0.00	0.00	
13,800.00	89.78	180.00	7,411.56	-5,912.90	-664.65	5,912.90	0.00	0.00	0.00	
13,900.00	89.78	180.00	7,411.95	-6,012.90	-664.65	6,012.90	0.00	0.00	0.00	
14,000.00	89.78	180.00	7,412.34	-6,112.90	-664.65	6,112.90	0.00	0.00	0.00	
14,100.00	89.78	180.00	7,412.73	-6,212.90	-664.65	6,212.90	0.00	0.00	0.00	
14,200.00	89.78	180.00	7,413.13	-6,312.90	-664.65	6,312.90	0.00	0.00	0.00	
14,300.00	89.78	180.00	7,413.52	-6,412.90	-664.65	6,412.90	0.00	0.00	0.00	
14,400.00	89.78	180.00	7,413.91	-6,512.89	-664.65	6,512.89	0.00	0.00	0.00	
14,500.00	89.78	180.00	7,414.30	-6,612.89	-664.65	6,612.89	0.00	0.00	0.00	
14,600.00	89.78	180.00	7,414.69	-6,712.89	-664.65	6,712.89	0.00	0.00	0.00	
14,700.00	89.78	180.00	7,415.09	-6,812.89	-664.65	6,812.89	0.00	0.00	0.00	
14,800.00	89.78	180.00	7,415.48	-6,912.89	-664.65	6,912.89	0.00	0.00	0.00	
14,900.00	89.78	180.00	7,415.87	-7,012.89	-664.65	7,012.89	0.00	0.00	0.00	
15,000.00	89.78	180.00	7,416.26	-7,112.89	-664.65	7,112.89	0.00	0.00	0.00	
15,100.00	89.78	180.00	7,416.66	-7,212.89	-664.65	7,212.89	0.00	0.00	0.00	
15,200.00	89.78	180.00	7,417.05	-7,312.89	-664.65	7,312.89	0.00	0.00	0.00	
15,300.00	89.78	180.00	7,417.44	-7,412.89	-664.65	7,412.89	0.00	0.00	0.00	
15,400.00	89.78	180.00	7,417.83	-7,512.89	-664.65	7,512.89	0.00	0.00	0.00	
15,442.21	89.78	180.00	7,418.00	-7,555.10	-664.65	7,555.10	0.00	0.00	0.00	
TD at 15442.21 - PBHL_BADDING 34N-2HZ(1 FSL 180 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_BADDING 34N-2	0.00	0.00	7,418.00	-7,555.10	-664.65	1,270,384.12	3,209,028.67	40.0731780	-104.7530680
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,224.00	1,224.00	9 5/8"	9.625	12.250	
7,799.06	7,388.00	7"(2500 FSL 180 FWL)	7.000	7.500	

<b>Database:</b>	Denver Sales	<b>Local Co-ordinate Reference:</b>	Well BADDING 34N-2HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 5102 & KB 17 @ 5119.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 5102 & KB 17 @ 5119.00ft (ASSUMED)
<b>Site:</b>	BADDING 11-35HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	BADDING 34N-2HZ	<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 (°)
1,109.00	1,109.00	Fox Hills Base			
4,326.09	4,280.00	Parkman			
4,671.37	4,619.00	Sussex			
7,306.10	7,187.00	Sharon Springs			
7,355.29	7,223.00	Niobrara A			
7,521.43	7,321.00	Niobrara B Chalk			
7,798.10	7,388.00	Niobrara C			

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,424.00	1,424.00	0.00	0.00	Start Build 2.00	
1,970.85	1,967.54	36.63	-36.96	Start 4383.60 hold at 1970.85 MD	
6,354.45	6,271.51	622.08	-627.69	Start Drop -2.00	
6,901.30	6,815.05	658.71	-664.65	Start DLS 10.00 TFO 180.00	
7,799.06	7,388.00	88.00	-664.65	Start 7643.16 hold at 7799.06 MD	
15,442.21	7,418.00	-7,555.10	-664.65	TD at 15442.21	