





Scientific Drilling

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**GOODIN 15-7HZ Pad**

**GOODIN 15N-B6HZ**

**OH**

**Plan: PLAN #1 PRELIMINARY**

## **Standard Planning Report**

**16 September, 2014**

<b>Database:</b>	Denver Sales	<b>Local Co-ordinate Reference:</b>	Well GOODIN 15N-B6HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4980 & KB 17 @ 4997.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4980 & KB 17 @ 4997.00ft (ASSUMED)
<b>Site:</b>	GOODIN 15-7HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	GOODIN 15N-B6HZ	<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>	GOODIN 15-7HZ Pad, SECTION 6 T1N R65W			
<b>Site Position:</b>		<b>Northing:</b>	1,265,650.80 usft	<b>Latitude:</b> 40.0598470
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,223,158.76 usft	<b>Longitude:</b> -104.7027310
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> 0.52 °

<b>Well</b>	GOODIN 15N-B6HZ, 412 FSL 1540 FEL			
<b>Well Position</b>	<b>+N/-S</b>	-0.39 ft	<b>Northing:</b>	1,265,650.82 usft
	<b>+E/-W</b>	45.07 ft	<b>Easting:</b>	3,223,203.83 usft
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	0.00 ft
			<b>Ground Level:</b>	4,980.00 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>
	BGGM2014	9/8/2014	8.46	66.67	52,511

<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	359.40

<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	
1,608.00	0.00	0.00	1,608.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,211.56	12.07	180.00	2,207.11	-63.35	0.00	2.00	2.00	0.00	180.00	
5,847.75	12.07	180.00	5,762.89	-823.77	0.00	0.00	0.00	0.00	0.00	
6,451.31	0.00	0.00	6,362.00	-887.12	0.00	2.00	-2.00	0.00	180.00	
6,651.35	0.00	0.00	6,562.04	-887.12	0.00	0.00	0.00	0.00	0.00	
7,552.26	90.09	358.82	7,135.00	-313.38	-11.81	10.00	10.00	-0.13	358.82	
13,249.80	90.09	358.82	7,126.00	5,382.95	-129.10	0.00	0.00	0.00	0.00	PBHL_GOODIN 15N-

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<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4980 & KB 17 @ 4997.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4980 & KB 17 @ 4997.00ft (ASSUMED)
<b>Site:</b>	GOODIN 15-7HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	GOODIN 15N-B6HZ	<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
667.00	0.00	0.00	667.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Base Fox Hills</b>									
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
1,300.00	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
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,508.00	0.00	0.00	1,508.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>9 5/8"</b>									
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,608.00	0.00	0.00	1,608.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
1,700.00	1.84	180.00	1,699.98	-1.48	0.00	-1.48	2.00	2.00	0.00
1,800.00	3.84	180.00	1,799.86	-6.43	0.00	-6.43	2.00	2.00	0.00
1,900.00	5.84	180.00	1,899.49	-14.87	0.00	-14.87	2.00	2.00	0.00
2,000.00	7.84	180.00	1,998.78	-26.78	0.00	-26.78	2.00	2.00	0.00
2,100.00	9.84	180.00	2,097.59	-42.14	0.00	-42.14	2.00	2.00	0.00
2,200.00	11.84	180.00	2,195.80	-60.95	0.00	-60.95	2.00	2.00	0.00
2,211.56	12.07	180.00	2,207.11	-63.35	0.00	-63.34	2.00	2.00	0.00
<b>Start 3636.19 hold at 2211.56 MD</b>									
2,300.00	12.07	180.00	2,293.59	-81.84	0.00	-81.84	0.00	0.00	0.00
2,400.00	12.07	180.00	2,391.38	-102.75	0.00	-102.75	0.00	0.00	0.00
2,500.00	12.07	180.00	2,489.17	-123.67	0.00	-123.66	0.00	0.00	0.00
2,600.00	12.07	180.00	2,586.96	-144.58	0.00	-144.57	0.00	0.00	0.00
2,700.00	12.07	180.00	2,684.74	-165.49	0.00	-165.48	0.00	0.00	0.00
2,800.00	12.07	180.00	2,782.53	-186.40	0.00	-186.39	0.00	0.00	0.00
2,900.00	12.07	180.00	2,880.32	-207.32	0.00	-207.31	0.00	0.00	0.00
3,000.00	12.07	180.00	2,978.11	-228.23	0.00	-228.22	0.00	0.00	0.00
3,100.00	12.07	180.00	3,075.90	-249.14	0.00	-249.13	0.00	0.00	0.00
3,200.00	12.07	180.00	3,173.69	-270.06	0.00	-270.04	0.00	0.00	0.00
3,300.00	12.07	180.00	3,271.48	-290.97	0.00	-290.95	0.00	0.00	0.00
3,400.00	12.07	180.00	3,369.27	-311.88	0.00	-311.86	0.00	0.00	0.00
3,500.00	12.07	180.00	3,467.06	-332.79	0.00	-332.78	0.00	0.00	0.00
3,600.00	12.07	180.00	3,564.84	-353.71	0.00	-353.69	0.00	0.00	0.00
3,700.00	12.07	180.00	3,662.63	-374.62	0.00	-374.60	0.00	0.00	0.00
3,800.00	12.07	180.00	3,760.42	-395.53	0.00	-395.51	0.00	0.00	0.00
3,900.00	12.07	180.00	3,858.21	-416.45	0.00	-416.42	0.00	0.00	0.00
4,000.00	12.07	180.00	3,956.00	-437.36	0.00	-437.33	0.00	0.00	0.00
4,100.00	12.07	180.00	4,053.79	-458.27	0.00	-458.25	0.00	0.00	0.00
4,200.00	12.07	180.00	4,151.58	-479.18	0.00	-479.16	0.00	0.00	0.00
4,279.17	12.07	180.00	4,229.00	-495.74	0.00	-495.71	0.00	0.00	0.00
<b>Parkman</b>									
4,300.00	12.07	180.00	4,249.37	-500.10	0.00	-500.07	0.00	0.00	0.00

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<b>Well:</b>	GOODIN 15N-B6HZ	<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	12.07	180.00	4,347.15	-521.01	0.00	-520.98	0.00	0.00	0.00	
4,500.00	12.07	180.00	4,444.94	-541.92	0.00	-541.89	0.00	0.00	0.00	
4,543.01	12.07	180.00	4,487.00	-550.92	0.00	-550.89	0.00	0.00	0.00	
<b>Sussex</b>										
4,600.00	12.07	180.00	4,542.73	-562.83	0.00	-562.80	0.00	0.00	0.00	
4,700.00	12.07	180.00	4,640.52	-583.75	0.00	-583.72	0.00	0.00	0.00	
4,800.00	12.07	180.00	4,738.31	-604.66	0.00	-604.63	0.00	0.00	0.00	
4,900.00	12.07	180.00	4,836.10	-625.57	0.00	-625.54	0.00	0.00	0.00	
5,000.00	12.07	180.00	4,933.89	-646.49	0.00	-646.45	0.00	0.00	0.00	
5,100.00	12.07	180.00	5,031.68	-667.40	0.00	-667.36	0.00	0.00	0.00	
5,200.00	12.07	180.00	5,129.47	-688.31	0.00	-688.27	0.00	0.00	0.00	
5,300.00	12.07	180.00	5,227.25	-709.22	0.00	-709.19	0.00	0.00	0.00	
5,400.00	12.07	180.00	5,325.04	-730.14	0.00	-730.10	0.00	0.00	0.00	
5,500.00	12.07	180.00	5,422.83	-751.05	0.00	-751.01	0.00	0.00	0.00	
5,600.00	12.07	180.00	5,520.62	-771.96	0.00	-771.92	0.00	0.00	0.00	
5,700.00	12.07	180.00	5,618.41	-792.88	0.00	-792.83	0.00	0.00	0.00	
5,800.00	12.07	180.00	5,716.20	-813.79	0.00	-813.74	0.00	0.00	0.00	
5,847.75	12.07	180.00	5,762.89	-823.77	0.00	-823.73	0.00	0.00	0.00	
<b>Start Drop -2.00</b>										
5,900.00	11.03	180.00	5,814.08	-834.23	0.00	-834.19	2.00	-2.00	0.00	
6,000.00	9.03	180.00	5,912.55	-851.64	0.00	-851.60	2.00	-2.00	0.00	
6,100.00	7.03	180.00	6,011.57	-865.61	0.00	-865.56	2.00	-2.00	0.00	
6,200.00	5.03	180.00	6,111.01	-876.10	0.00	-876.06	2.00	-2.00	0.00	
6,300.00	3.03	180.00	6,210.76	-883.12	0.00	-883.08	2.00	-2.00	0.00	
6,400.00	1.03	180.00	6,310.69	-886.66	0.00	-886.61	2.00	-2.00	0.00	
6,451.31	0.00	0.00	6,362.00	-887.12	0.00	-887.07	2.00	-2.00	0.00	
<b>Start 200.04 hold at 6451.31 MD</b>										
6,500.00	0.00	0.00	6,410.69	-887.12	0.00	-887.07	0.00	0.00	0.00	
6,600.00	0.00	0.00	6,510.69	-887.12	0.00	-887.07	0.00	0.00	0.00	
6,651.35	0.00	0.00	6,562.04	-887.12	0.00	-887.07	0.00	0.00	0.00	
<b>Start DLS 10.00 TFO 358.82</b>										
6,700.00	4.86	358.82	6,610.63	-885.06	-0.04	-885.01	10.00	10.00	0.00	
6,800.00	14.86	358.82	6,709.03	-867.95	-0.39	-867.90	10.00	10.00	0.00	
6,900.00	24.86	358.82	6,802.96	-834.02	-1.09	-833.96	10.00	10.00	0.00	
7,000.00	34.86	358.82	6,889.57	-784.30	-2.12	-784.23	10.00	10.00	0.00	
7,100.00	44.86	358.82	6,966.22	-720.30	-3.43	-720.22	10.00	10.00	0.00	
7,113.96	46.26	358.82	6,976.00	-710.33	-3.64	-710.25	10.00	10.00	0.00	
<b>SSPG</b>										
7,165.64	51.43	358.82	7,010.00	-671.44	-4.44	-671.35	10.00	10.00	0.00	
<b>NBRR</b>										
7,200.00	54.86	358.82	7,030.60	-643.96	-5.01	-643.87	10.00	10.00	0.00	
7,300.00	64.86	358.82	7,080.74	-557.60	-6.78	-557.50	10.00	10.00	0.00	
7,392.07	74.07	358.82	7,113.00	-471.49	-8.56	-471.37	10.00	10.00	0.00	
<b>N470_B_CK</b>										
7,400.00	74.86	358.82	7,115.12	-463.85	-8.72	-463.73	10.00	10.00	0.00	
7,500.00	84.86	358.82	7,132.70	-365.56	-10.74	-365.42	10.00	10.00	0.00	
7,552.26	90.09	358.82	7,135.00	-313.38	-11.81	-313.24	10.00	10.00	0.00	
<b>Start 5697.54 hold at 7552.26 MD - 7"(100 FSL 1560 FEL)</b>										
7,600.00	90.09	358.82	7,134.92	-265.65	-12.80	-265.50	0.00	0.00	0.00	
7,700.00	90.09	358.82	7,134.76	-165.67	-14.85	-165.50	0.00	0.00	0.00	
7,800.00	90.09	358.82	7,134.61	-65.69	-16.91	-65.51	0.00	0.00	0.00	
7,900.00	90.09	358.82	7,134.45	34.29	-18.97	34.49	0.00	0.00	0.00	
8,000.00	90.09	358.82	7,134.29	134.27	-21.03	134.48	0.00	0.00	0.00	

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<b>Site:</b>	GOODIN 15-7HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	GOODIN 15N-B6HZ	<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	90.09	358.82	7,134.13	234.25	-23.09	234.48	0.00	0.00	0.00
8,200.00	90.09	358.82	7,133.97	334.23	-25.15	334.47	0.00	0.00	0.00
8,300.00	90.09	358.82	7,133.82	434.20	-27.21	434.46	0.00	0.00	0.00
8,400.00	90.09	358.82	7,133.66	534.18	-29.26	534.46	0.00	0.00	0.00
8,500.00	90.09	358.82	7,133.50	634.16	-31.32	634.45	0.00	0.00	0.00
8,600.00	90.09	358.82	7,133.34	734.14	-33.38	734.45	0.00	0.00	0.00
8,700.00	90.09	358.82	7,133.18	834.12	-35.44	834.44	0.00	0.00	0.00
8,800.00	90.09	358.82	7,133.03	934.10	-37.50	934.44	0.00	0.00	0.00
8,900.00	90.09	358.82	7,132.87	1,034.08	-39.56	1,034.43	0.00	0.00	0.00
9,000.00	90.09	358.82	7,132.71	1,134.05	-41.62	1,134.43	0.00	0.00	0.00
9,100.00	90.09	358.82	7,132.55	1,234.03	-43.67	1,234.42	0.00	0.00	0.00
9,200.00	90.09	358.82	7,132.40	1,334.01	-45.73	1,334.42	0.00	0.00	0.00
9,300.00	90.09	358.82	7,132.24	1,433.99	-47.79	1,434.41	0.00	0.00	0.00
9,400.00	90.09	358.82	7,132.08	1,533.97	-49.85	1,534.41	0.00	0.00	0.00
9,500.00	90.09	358.82	7,131.92	1,633.95	-51.91	1,634.40	0.00	0.00	0.00
9,600.00	90.09	358.82	7,131.76	1,733.93	-53.97	1,734.40	0.00	0.00	0.00
9,700.00	90.09	358.82	7,131.61	1,833.91	-56.03	1,834.39	0.00	0.00	0.00
9,800.00	90.09	358.82	7,131.45	1,933.88	-58.08	1,934.39	0.00	0.00	0.00
9,900.00	90.09	358.82	7,131.29	2,033.86	-60.14	2,034.38	0.00	0.00	0.00
10,000.00	90.09	358.82	7,131.13	2,133.84	-62.20	2,134.38	0.00	0.00	0.00
10,100.00	90.09	358.82	7,130.97	2,233.82	-64.26	2,234.37	0.00	0.00	0.00
10,200.00	90.09	358.82	7,130.82	2,333.80	-66.32	2,334.37	0.00	0.00	0.00
10,300.00	90.09	358.82	7,130.66	2,433.78	-68.38	2,434.36	0.00	0.00	0.00
10,400.00	90.09	358.82	7,130.50	2,533.76	-70.44	2,534.35	0.00	0.00	0.00
10,500.00	90.09	358.82	7,130.34	2,633.73	-72.49	2,634.35	0.00	0.00	0.00
10,600.00	90.09	358.82	7,130.18	2,733.71	-74.55	2,734.34	0.00	0.00	0.00
10,700.00	90.09	358.82	7,130.03	2,833.69	-76.61	2,834.34	0.00	0.00	0.00
10,800.00	90.09	358.82	7,129.87	2,933.67	-78.67	2,934.33	0.00	0.00	0.00
10,900.00	90.09	358.82	7,129.71	3,033.65	-80.73	3,034.33	0.00	0.00	0.00
11,000.00	90.09	358.82	7,129.55	3,133.63	-82.79	3,134.32	0.00	0.00	0.00
11,100.00	90.09	358.82	7,129.39	3,233.61	-84.85	3,234.32	0.00	0.00	0.00
11,200.00	90.09	358.82	7,129.24	3,333.59	-86.90	3,334.31	0.00	0.00	0.00
11,300.00	90.09	358.82	7,129.08	3,433.56	-88.96	3,434.31	0.00	0.00	0.00
11,400.00	90.09	358.82	7,128.92	3,533.54	-91.02	3,534.30	0.00	0.00	0.00
11,500.00	90.09	358.82	7,128.76	3,633.52	-93.08	3,634.30	0.00	0.00	0.00
11,600.00	90.09	358.82	7,128.61	3,733.50	-95.14	3,734.29	0.00	0.00	0.00
11,700.00	90.09	358.82	7,128.45	3,833.48	-97.20	3,834.29	0.00	0.00	0.00
11,800.00	90.09	358.82	7,128.29	3,933.46	-99.26	3,934.28	0.00	0.00	0.00
11,900.00	90.09	358.82	7,128.13	4,033.44	-101.31	4,034.28	0.00	0.00	0.00
12,000.00	90.09	358.82	7,127.97	4,133.42	-103.37	4,134.27	0.00	0.00	0.00
12,100.00	90.09	358.82	7,127.82	4,233.39	-105.43	4,234.27	0.00	0.00	0.00
12,200.00	90.09	358.82	7,127.66	4,333.37	-107.49	4,334.26	0.00	0.00	0.00
12,300.00	90.09	358.82	7,127.50	4,433.35	-109.55	4,434.26	0.00	0.00	0.00
12,400.00	90.09	358.82	7,127.34	4,533.33	-111.61	4,534.25	0.00	0.00	0.00
12,500.00	90.09	358.82	7,127.18	4,633.31	-113.67	4,634.24	0.00	0.00	0.00
12,600.00	90.09	358.82	7,127.03	4,733.29	-115.72	4,734.24	0.00	0.00	0.00
12,700.00	90.09	358.82	7,126.87	4,833.27	-117.78	4,834.23	0.00	0.00	0.00
12,800.00	90.09	358.82	7,126.71	4,933.24	-119.84	4,934.23	0.00	0.00	0.00
12,900.00	90.09	358.82	7,126.55	5,033.22	-121.90	5,034.22	0.00	0.00	0.00
13,000.00	90.09	358.82	7,126.39	5,133.20	-123.96	5,134.22	0.00	0.00	0.00
13,100.00	90.09	358.82	7,126.24	5,233.18	-126.02	5,234.21	0.00	0.00	0.00
13,200.00	90.09	358.82	7,126.08	5,333.16	-128.07	5,334.21	0.00	0.00	0.00
13,249.80	90.09	358.82	7,126.00	5,382.95	-129.10	5,384.00	0.00	0.00	0.00

<b>Database:</b>	Denver Sales	<b>Local Co-ordinate Reference:</b>	Well GOODIN 15N-B6HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4980 & KB 17 @ 4997.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4980 & KB 17 @ 4997.00ft (ASSUMED)
<b>Site:</b>	GOODIN 15-7HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	GOODIN 15N-B6HZ	<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)
TD at 13249.80 - PBHL_GOODIN 15N-B5HZ(500 FSL 1615 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_GOODIN 15N-B5	0.00	0.00	7,126.00	5,382.95	-129.10	1,271,032.38	3,223,026.33	40.0746230	-104.7030313
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,508.00	1,508.00	9 5/8"	9.625	13.500	
7,552.26	7,135.00	7"(100 FSL 1560 FEL)	7.000	8.750	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
667.00	667.00	Base Fox Hills				
4,279.17	4,229.00	Parkman				
4,543.01	4,487.00	Sussex				
7,113.96	6,976.00	SSPG				
7,165.64	7,010.00	NBRR				
7,392.07	7,113.00	N470_B_CK				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,608.00	1,608.00	0.00	0.00	Start Build 2.00	
2,211.56	2,207.11	-63.35	0.00	Start 3636.19 hold at 2211.56 MD	
5,847.75	5,762.89	-823.77	0.00	Start Drop -2.00	
6,451.31	6,362.00	-887.12	0.00	Start 200.04 hold at 6451.31 MD	
6,651.35	6,562.04	-887.12	0.00	Start DLS 10.00 TFO 358.82	
7,552.26	7,135.00	-313.38	-11.81	Start 5697.54 hold at 7552.26 MD	
13,249.80	7,126.00	5,382.95	-129.10	TD at 13249.80	