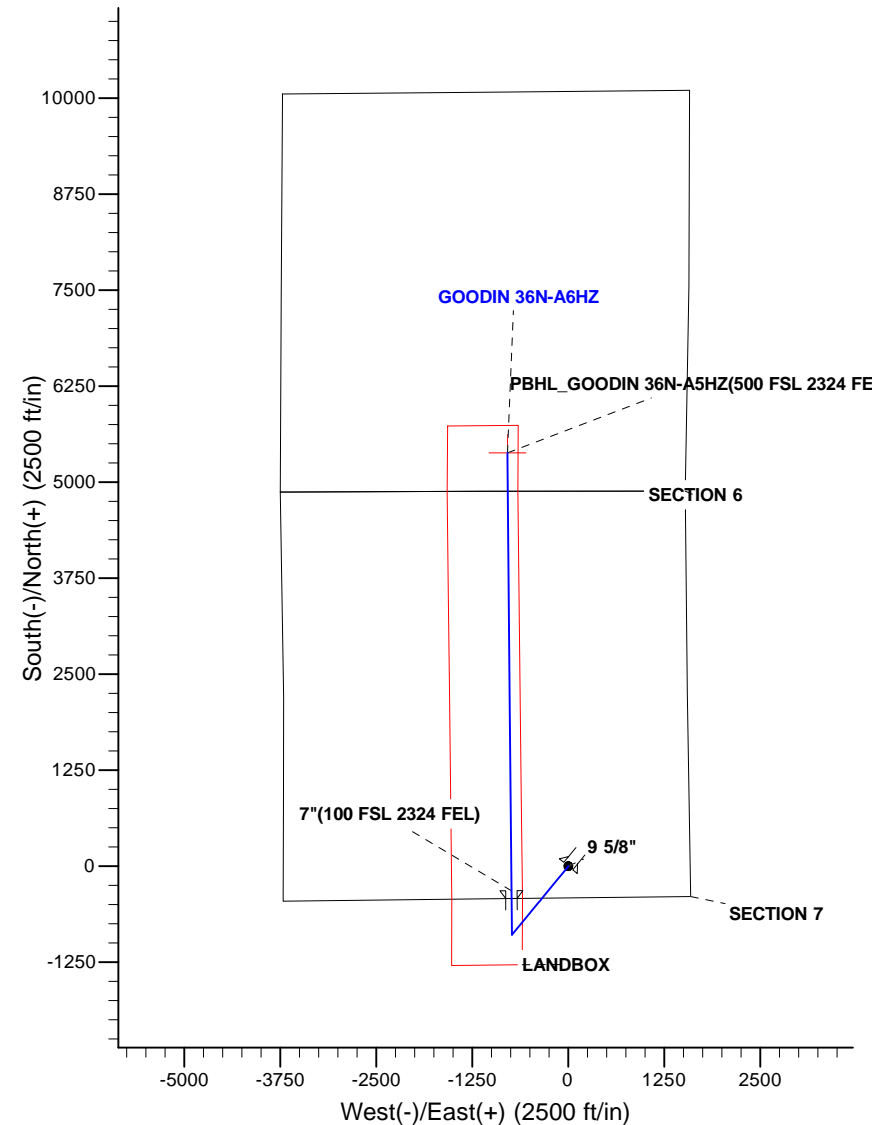
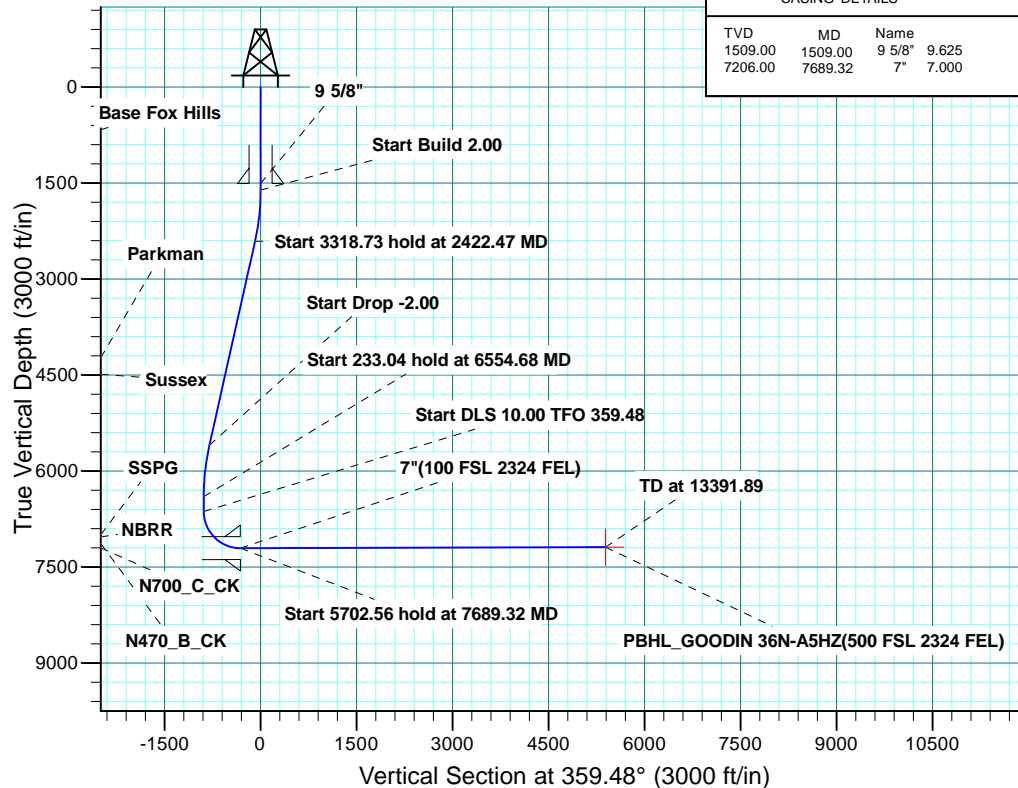


WELL DETAILS: GOODIN 36N-A6HZ								
GL 4981 & KB 17 @ 4998.00ft (ASSUMED)								
+N-S 0.00		+E-W 0.00		Northing 1265650.81	Easting 3223158.76	Latitude 40.0598470	Longitude -104.7027310	
SECTION DETAILS								
MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1609.00	0.00	0.00	1609.00	0.00	0.00	0.00	0.00	0.00
2422.47	16.27	219.46	2411.59	-88.57	-72.91	2.00	219.46	-87.91
5741.20	16.27	219.46	5597.41	-806.43	-663.79	0.00	0.00	-800.37
6554.68	0.00	0.00	6400.00	-895.00	-736.70	2.00	180.00	-888.28
6787.72	0.00	0.00	6633.04	-895.00	-736.70	0.00	0.00	-888.28
7689.32	90.16	359.48	7206.00	-320.46	-741.94	10.00	359.48	-313.71
13391.89	90.16	359.48	7190.00	5381.84	-793.93	0.00	0.00	5388.83
PBHL_GOODIN 36N-A5HZ(500 FSL 2324 FEL)								
DESIGN TARGET DETAILS								
Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Shape
PBHL 7190.00		5381.84	-793.93	1271025.28	3222316.48	40.0746210	-104.7055680	Point
- plan hits target center								

PROJECT DETAILS: COLORADO NORTHERN ZONE - 83	
Geodetic System: US State Plane 1983	
Datum: North American Datum 1983	
Ellipsoid: GRS 1980	
Zone: Colorado Northern Zone	
Location: SECTION 6 T1N R65W	
System Datum: Mean Sea Level	

FORMATION TOP DETAILS			
TVDPath	MDPath	Formation	Inc
668.00	668.00	Base Fox Hills	0.00
4230.00	4316.74	Parkman	16.27
4488.00	4585.51	Sussex	16.27
6996.00	7180.79	SSPG	39.31
7030.00	7226.26	NBRR	43.85
7133.00	7395.33	N470_B_CK	60.76
7199.00	7598.08	N700_C_CK	81.04

CASING DETAILS			
TVD	MD	Name	
1509.00	1509.00	9 5/8"	9.625
7206.00	7689.32	7"	7.000





**Scientific Drilling**

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**GOODIN 15-7HZ Pad**

**GOODIN 36N-A6HZ**

**OH**

**Plan: PLAN #1 PRELIMINARY**

## **Standard Planning Report**

**08 September, 2014**

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GOODIN 36N-A6HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4981 & KB 17 @ 4998.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4981 & KB 17 @ 4998.00ft (ASSUMED)
<b>Site:</b>	GOODIN 15-7HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	GOODIN 36N-A6HZ	<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 36N-A6HZ, 413' FSL 1585' FEL			
<b>Well Position</b>	<b>+N/-S</b>	0.00 ft	<b>Northing:</b>	1,265,650.80 usft
	<b>+E/-W</b>	0.00 ft	<b>Easting:</b>	3,223,158.76 usft
<b>Position Uncertainty</b>		0.00 ft	<b>Wellhead Elevation:</b>	0.00 ft
			<b>Ground Level:</b>	4,981.00 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	09/08/14	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	359.48

<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	
1,609.00	0.00	0.00	1,609.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,422.47	16.27	219.46	2,411.59	-88.57	-72.91	2.00	2.00	0.00	219.46	
5,741.20	16.27	219.46	5,597.41	-806.43	-663.79	0.00	0.00	0.00	0.00	
6,554.68	0.00	0.00	6,400.00	-895.00	-736.70	2.00	-2.00	0.00	180.00	
6,787.72	0.00	0.00	6,633.04	-895.00	-736.70	0.00	0.00	0.00	0.00	
7,689.32	90.16	359.48	7,206.00	-320.46	-741.94	10.00	10.00	-0.06	359.48	
13,391.89	90.16	359.48	7,190.00	5,381.84	-793.93	0.00	0.00	0.00	0.00	PBHL_GOODIN 36N-

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GOODIN 36N-A6HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4981 & KB 17 @ 4998.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4981 & KB 17 @ 4998.00ft (ASSUMED)
<b>Site:</b>	GOODIN 15-7HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	GOODIN 36N-A6HZ	<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
668.00	0.00	0.00	668.00	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
1,509.00	0.00	0.00	1,509.00	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
1,609.00	0.00	0.00	1,609.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
1,700.00	1.82	219.46	1,699.98	-1.12	-0.92	-1.11	2.00	2.00	0.00
1,800.00	3.82	219.46	1,799.86	-4.91	-4.04	-4.88	2.00	2.00	0.00
1,900.00	5.82	219.46	1,899.50	-11.40	-9.38	-11.32	2.00	2.00	0.00
2,000.00	7.82	219.46	1,998.79	-20.57	-16.93	-20.41	2.00	2.00	0.00
2,100.00	9.82	219.46	2,097.60	-32.41	-26.68	-32.16	2.00	2.00	0.00
2,200.00	11.82	219.46	2,195.82	-46.90	-38.60	-46.55	2.00	2.00	0.00
2,300.00	13.82	219.46	2,293.32	-64.03	-52.71	-63.55	2.00	2.00	0.00
2,400.00	15.82	219.46	2,389.99	-83.78	-68.96	-83.15	2.00	2.00	0.00
2,422.47	16.27	219.46	2,411.59	-88.57	-72.91	-87.91	2.00	2.00	0.00
<b>Start 3318.73 hold at 2422.47 MD</b>									
2,500.00	16.27	219.46	2,486.01	-105.34	-86.71	-104.55	0.00	0.00	0.00
2,600.00	16.27	219.46	2,582.00	-126.97	-104.52	-126.02	0.00	0.00	0.00
2,700.00	16.27	219.46	2,678.00	-148.60	-122.32	-147.49	0.00	0.00	0.00
2,800.00	16.27	219.46	2,773.99	-170.23	-140.12	-168.96	0.00	0.00	0.00
2,900.00	16.27	219.46	2,869.99	-191.86	-157.93	-190.42	0.00	0.00	0.00
3,000.00	16.27	219.46	2,965.98	-213.50	-175.73	-211.89	0.00	0.00	0.00
3,100.00	16.27	219.46	3,061.98	-235.13	-193.54	-233.36	0.00	0.00	0.00
3,200.00	16.27	219.46	3,157.98	-256.76	-211.34	-254.83	0.00	0.00	0.00
3,300.00	16.27	219.46	3,253.97	-278.39	-229.15	-276.29	0.00	0.00	0.00
3,400.00	16.27	219.46	3,349.97	-300.02	-246.95	-297.76	0.00	0.00	0.00
3,500.00	16.27	219.46	3,445.96	-321.65	-264.76	-319.23	0.00	0.00	0.00
3,600.00	16.27	219.46	3,541.96	-343.28	-282.56	-340.70	0.00	0.00	0.00
3,700.00	16.27	219.46	3,637.95	-364.91	-300.37	-362.17	0.00	0.00	0.00
3,800.00	16.27	219.46	3,733.95	-386.54	-318.17	-383.63	0.00	0.00	0.00
3,900.00	16.27	219.46	3,829.94	-408.17	-335.97	-405.10	0.00	0.00	0.00
4,000.00	16.27	219.46	3,925.94	-429.80	-353.78	-426.57	0.00	0.00	0.00
4,100.00	16.27	219.46	4,021.93	-451.43	-371.58	-448.04	0.00	0.00	0.00
4,200.00	16.27	219.46	4,117.93	-473.06	-389.39	-469.51	0.00	0.00	0.00
4,300.00	16.27	219.46	4,213.93	-494.69	-407.19	-490.97	0.00	0.00	0.00
4,316.74	16.27	219.46	4,230.00	-498.31	-410.17	-494.57	0.00	0.00	0.00
<b>Parkman</b>									

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GOODIN 36N-A6HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4981 & KB 17 @ 4998.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4981 & KB 17 @ 4998.00ft (ASSUMED)
<b>Site:</b>	GOODIN 15-7HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	GOODIN 36N-A6HZ	<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)
4,400.00	16.27	219.46	4,309.92	-516.32	-425.00	-512.44	0.00	0.00	0.00
4,500.00	16.27	219.46	4,405.92	-537.95	-442.80	-533.91	0.00	0.00	0.00
4,585.51	16.27	219.46	4,488.00	-556.45	-458.03	-552.27	0.00	0.00	0.00
<b>Sussex</b>									
4,600.00	16.27	219.46	4,501.91	-559.58	-460.61	-555.38	0.00	0.00	0.00
4,700.00	16.27	219.46	4,597.91	-581.21	-478.41	-576.84	0.00	0.00	0.00
4,800.00	16.27	219.46	4,693.90	-602.84	-496.22	-598.31	0.00	0.00	0.00
4,900.00	16.27	219.46	4,789.90	-624.47	-514.02	-619.78	0.00	0.00	0.00
5,000.00	16.27	219.46	4,885.89	-646.10	-531.82	-641.25	0.00	0.00	0.00
5,100.00	16.27	219.46	4,981.89	-667.73	-549.63	-662.72	0.00	0.00	0.00
5,200.00	16.27	219.46	5,077.89	-689.36	-567.43	-684.18	0.00	0.00	0.00
5,300.00	16.27	219.46	5,173.88	-710.99	-585.24	-705.65	0.00	0.00	0.00
5,400.00	16.27	219.46	5,269.88	-732.62	-603.04	-727.12	0.00	0.00	0.00
5,500.00	16.27	219.46	5,365.87	-754.25	-620.85	-748.59	0.00	0.00	0.00
5,600.00	16.27	219.46	5,461.87	-775.88	-638.65	-770.06	0.00	0.00	0.00
5,700.00	16.27	219.46	5,557.86	-797.51	-656.46	-791.52	0.00	0.00	0.00
5,741.20	16.27	219.46	5,597.41	-806.43	-663.79	-800.37	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
5,800.00	15.09	219.46	5,654.02	-818.70	-673.89	-812.55	2.00	-2.00	0.00
5,900.00	13.09	219.46	5,751.01	-837.50	-689.37	-831.20	2.00	-2.00	0.00
6,000.00	11.09	219.46	5,848.78	-853.67	-702.68	-847.26	2.00	-2.00	0.00
6,100.00	9.09	219.46	5,947.23	-867.20	-713.82	-860.69	2.00	-2.00	0.00
6,200.00	7.09	219.46	6,046.23	-878.07	-722.76	-871.47	2.00	-2.00	0.00
6,300.00	5.09	219.46	6,145.66	-886.27	-729.51	-879.61	2.00	-2.00	0.00
6,400.00	3.09	219.46	6,245.40	-891.78	-734.05	-885.08	2.00	-2.00	0.00
6,500.00	1.09	219.46	6,345.33	-894.60	-736.37	-887.88	2.00	-2.00	0.00
6,554.68	0.00	0.00	6,400.00	-895.00	-736.70	-888.28	2.00	-2.00	0.00
<b>Start 233.04 hold at 6554.68 MD</b>									
6,600.00	0.00	0.00	6,445.32	-895.00	-736.70	-888.28	0.00	0.00	0.00
6,700.00	0.00	0.00	6,545.32	-895.00	-736.70	-888.28	0.00	0.00	0.00
6,787.72	0.00	0.00	6,633.04	-895.00	-736.70	-888.28	0.00	0.00	0.00
<b>Start DLS 10.00 TFO 359.48</b>									
6,800.00	1.23	359.48	6,645.32	-894.87	-736.70	-888.15	10.00	10.00	0.00
6,900.00	11.23	359.48	6,744.61	-884.03	-736.80	-877.31	10.00	10.00	0.00
7,000.00	21.23	359.48	6,840.50	-856.12	-737.05	-849.40	10.00	10.00	0.00
7,100.00	31.23	359.48	6,930.09	-811.99	-737.46	-805.26	10.00	10.00	0.00
7,180.79	39.31	359.48	6,996.00	-765.38	-737.88	-758.65	10.00	10.00	0.00
<b>SSPG</b>									
7,200.00	41.23	359.48	7,010.66	-752.96	-738.00	-746.23	10.00	10.00	0.00
7,226.26	43.85	359.48	7,030.00	-735.21	-738.16	-728.48	10.00	10.00	0.00
<b>NBRR</b>									
7,300.00	51.23	359.48	7,079.75	-680.85	-738.65	-674.12	10.00	10.00	0.00
7,395.33	60.76	359.48	7,133.00	-601.91	-739.37	-595.18	10.00	10.00	0.00
<b>N470_B_CK</b>									
7,400.00	61.23	359.48	7,135.26	-597.83	-739.41	-591.09	10.00	10.00	0.00
7,500.00	71.23	359.48	7,175.52	-506.43	-740.24	-499.69	10.00	10.00	0.00
7,598.08	81.04	359.48	7,199.00	-411.34	-741.11	-404.59	10.00	10.00	0.00
<b>N700_C_CK</b>									
7,600.00	81.23	359.48	7,199.30	-409.44	-741.13	-402.69	10.00	10.00	0.00
7,689.32	90.16	359.48	7,206.00	-320.46	-741.94	-313.71	10.00	10.00	0.00
<b>Start 5702.56 hold at 7689.32 MD - 7"(100 FSL 2324 FEL)</b>									
7,700.00	90.16	359.48	7,205.97	-309.78	-742.04	-303.04	0.00	0.00	0.00
7,800.00	90.16	359.48	7,205.69	-209.79	-742.95	-203.04	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GOODIN 36N-A6HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4981 & KB 17 @ 4998.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4981 & KB 17 @ 4998.00ft (ASSUMED)
<b>Site:</b>	GOODIN 15-7HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	GOODIN 36N-A6HZ	<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)
7,900.00	90.16	359.48	7,205.40	-109.79	-743.86	-103.04	0.00	0.00	0.00
8,000.00	90.16	359.48	7,205.12	-9.80	-744.77	-3.04	0.00	0.00	0.00
8,100.00	90.16	359.48	7,204.84	90.20	-745.68	96.96	0.00	0.00	0.00
8,200.00	90.16	359.48	7,204.56	190.20	-746.59	196.96	0.00	0.00	0.00
8,300.00	90.16	359.48	7,204.28	290.19	-747.51	296.96	0.00	0.00	0.00
8,400.00	90.16	359.48	7,204.00	390.19	-748.42	396.96	0.00	0.00	0.00
8,500.00	90.16	359.48	7,203.72	490.18	-749.33	496.96	0.00	0.00	0.00
8,600.00	90.16	359.48	7,203.44	590.18	-750.24	596.96	0.00	0.00	0.00
8,700.00	90.16	359.48	7,203.16	690.17	-751.15	696.96	0.00	0.00	0.00
8,800.00	90.16	359.48	7,202.88	790.17	-752.06	796.96	0.00	0.00	0.00
8,900.00	90.16	359.48	7,202.60	890.16	-752.98	896.96	0.00	0.00	0.00
9,000.00	90.16	359.48	7,202.32	990.16	-753.89	996.96	0.00	0.00	0.00
9,100.00	90.16	359.48	7,202.04	1,090.15	-754.80	1,096.96	0.00	0.00	0.00
9,200.00	90.16	359.48	7,201.76	1,190.15	-755.71	1,196.96	0.00	0.00	0.00
9,300.00	90.16	359.48	7,201.48	1,290.15	-756.62	1,296.96	0.00	0.00	0.00
9,400.00	90.16	359.48	7,201.20	1,390.14	-757.53	1,396.96	0.00	0.00	0.00
9,500.00	90.16	359.48	7,200.92	1,490.14	-758.45	1,496.96	0.00	0.00	0.00
9,600.00	90.16	359.48	7,200.64	1,590.13	-759.36	1,596.96	0.00	0.00	0.00
9,700.00	90.16	359.48	7,200.36	1,690.13	-760.27	1,696.96	0.00	0.00	0.00
9,800.00	90.16	359.48	7,200.08	1,790.12	-761.18	1,796.96	0.00	0.00	0.00
9,900.00	90.16	359.48	7,199.79	1,890.12	-762.09	1,896.96	0.00	0.00	0.00
10,000.00	90.16	359.48	7,199.51	1,990.11	-763.00	1,996.96	0.00	0.00	0.00
10,100.00	90.16	359.48	7,199.23	2,090.11	-763.92	2,096.96	0.00	0.00	0.00
10,200.00	90.16	359.48	7,198.95	2,190.10	-764.83	2,196.96	0.00	0.00	0.00
10,300.00	90.16	359.48	7,198.67	2,290.10	-765.74	2,296.95	0.00	0.00	0.00
10,400.00	90.16	359.48	7,198.39	2,390.10	-766.65	2,396.95	0.00	0.00	0.00
10,500.00	90.16	359.48	7,198.11	2,490.09	-767.56	2,496.95	0.00	0.00	0.00
10,600.00	90.16	359.48	7,197.83	2,590.09	-768.47	2,596.95	0.00	0.00	0.00
10,700.00	90.16	359.48	7,197.55	2,690.08	-769.39	2,696.95	0.00	0.00	0.00
10,800.00	90.16	359.48	7,197.27	2,790.08	-770.30	2,796.95	0.00	0.00	0.00
10,900.00	90.16	359.48	7,196.99	2,890.07	-771.21	2,896.95	0.00	0.00	0.00
11,000.00	90.16	359.48	7,196.71	2,990.07	-772.12	2,996.95	0.00	0.00	0.00
11,100.00	90.16	359.48	7,196.43	3,090.06	-773.03	3,096.95	0.00	0.00	0.00
11,200.00	90.16	359.48	7,196.15	3,190.06	-773.94	3,196.95	0.00	0.00	0.00
11,300.00	90.16	359.48	7,195.87	3,290.05	-774.86	3,296.95	0.00	0.00	0.00
11,400.00	90.16	359.48	7,195.59	3,390.05	-775.77	3,396.95	0.00	0.00	0.00
11,500.00	90.16	359.48	7,195.31	3,490.05	-776.68	3,496.95	0.00	0.00	0.00
11,600.00	90.16	359.48	7,195.03	3,590.04	-777.59	3,596.95	0.00	0.00	0.00
11,700.00	90.16	359.48	7,194.75	3,690.04	-778.50	3,696.95	0.00	0.00	0.00
11,800.00	90.16	359.48	7,194.47	3,790.03	-779.41	3,796.95	0.00	0.00	0.00
11,900.00	90.16	359.48	7,194.18	3,890.03	-780.33	3,896.95	0.00	0.00	0.00
12,000.00	90.16	359.48	7,193.90	3,990.02	-781.24	3,996.95	0.00	0.00	0.00
12,100.00	90.16	359.48	7,193.62	4,090.02	-782.15	4,096.95	0.00	0.00	0.00
12,200.00	90.16	359.48	7,193.34	4,190.01	-783.06	4,196.95	0.00	0.00	0.00
12,300.00	90.16	359.48	7,193.06	4,290.01	-783.97	4,296.95	0.00	0.00	0.00
12,400.00	90.16	359.48	7,192.78	4,390.00	-784.88	4,396.95	0.00	0.00	0.00
12,500.00	90.16	359.48	7,192.50	4,490.00	-785.80	4,496.95	0.00	0.00	0.00
12,600.00	90.16	359.48	7,192.22	4,590.00	-786.71	4,596.95	0.00	0.00	0.00
12,700.00	90.16	359.48	7,191.94	4,689.99	-787.62	4,696.95	0.00	0.00	0.00
12,800.00	90.16	359.48	7,191.66	4,789.99	-788.53	4,796.95	0.00	0.00	0.00
12,900.00	90.16	359.48	7,191.38	4,889.98	-789.44	4,896.94	0.00	0.00	0.00
13,000.00	90.16	359.48	7,191.10	4,989.98	-790.35	4,996.94	0.00	0.00	0.00
13,100.00	90.16	359.48	7,190.82	5,089.97	-791.27	5,096.94	0.00	0.00	0.00
13,200.00	90.16	359.48	7,190.54	5,189.97	-792.18	5,196.94	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GOODIN 36N-A6HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4981 & KB 17 @ 4998.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4981 & KB 17 @ 4998.00ft (ASSUMED)
<b>Site:</b>	GOODIN 15-7HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	GOODIN 36N-A6HZ	<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)
13,300.00	90.16	359.48	7,190.26	5,289.96	-793.09	5,296.94	0.00	0.00	0.00
13,391.89	90.16	359.48	7,190.00	5,381.84	-793.93	5,388.83	0.00	0.00	0.00
TD at 13391.89 - PBHL_GOODIN 36N-A5HZ(500 FSL 2324 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 36N-A5	0.00	0.00	7,190.00	5,381.84	-793.93	1,271,025.28	3,222,316.48	40.0746210	-104.7055680
- plan hits target center									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
1,509.00	1,509.00	9 5/8"	9.625	13.500	
7,689.32	7,206.00	7"(100 FSL 2324 FEL)	7.000	8.750	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
668.00	667.00	Base Fox Hills				
4,316.74	4,229.00	Parkman				
4,585.51	4,487.00	Sussex				
7,180.79	6,995.00	SSPG				
7,226.26	7,029.00	NBRR				
7,395.33	7,132.00	N470_B_CK				
7,598.08	7,198.00	N700_C_CK				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,609.00	1,609.00	0.00	0.00	Start Build 2.00	
2,422.47	2,411.59	-88.57	-72.91	Start 3318.73 hold at 2422.47 MD	
5,741.20	5,597.41	-806.43	-663.79	Start Drop -2.00	
6,554.68	6,400.00	-895.00	-736.70	Start 233.04 hold at 6554.68 MD	
6,787.72	6,633.04	-895.00	-736.70	Start DLS 10.00 TFO 359.48	
7,689.32	7,206.00	-320.46	-741.94	Start 5702.56 hold at 7689.32 MD	
13,391.89	7,190.00	5,381.84	-793.93	TD at 13391.89	