



Project: COLORADO NORTHERN ZONE - 83  
Site: GOODIN 15-7HZ Pad  
Well: GOODIN 38N-B6HZ  
Wellbore: OH  
Design: PLAN #1 PRELIMINARY

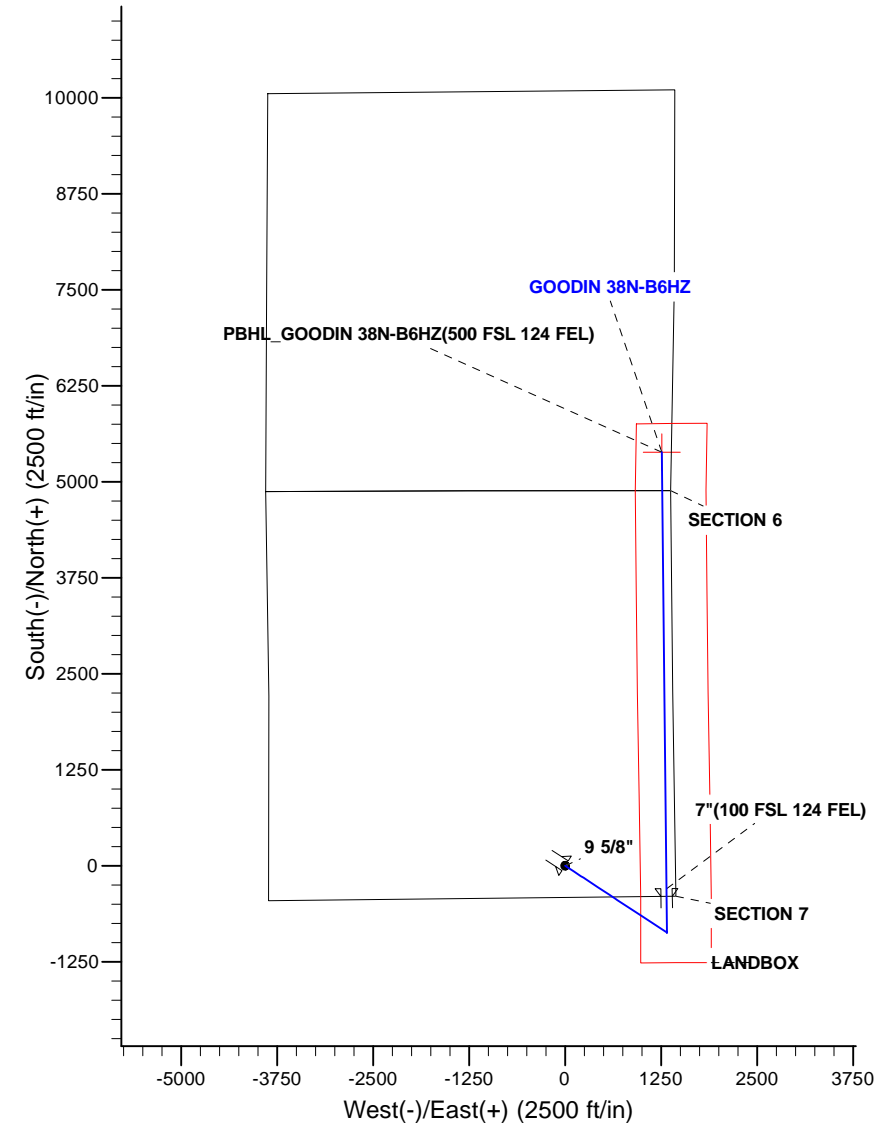
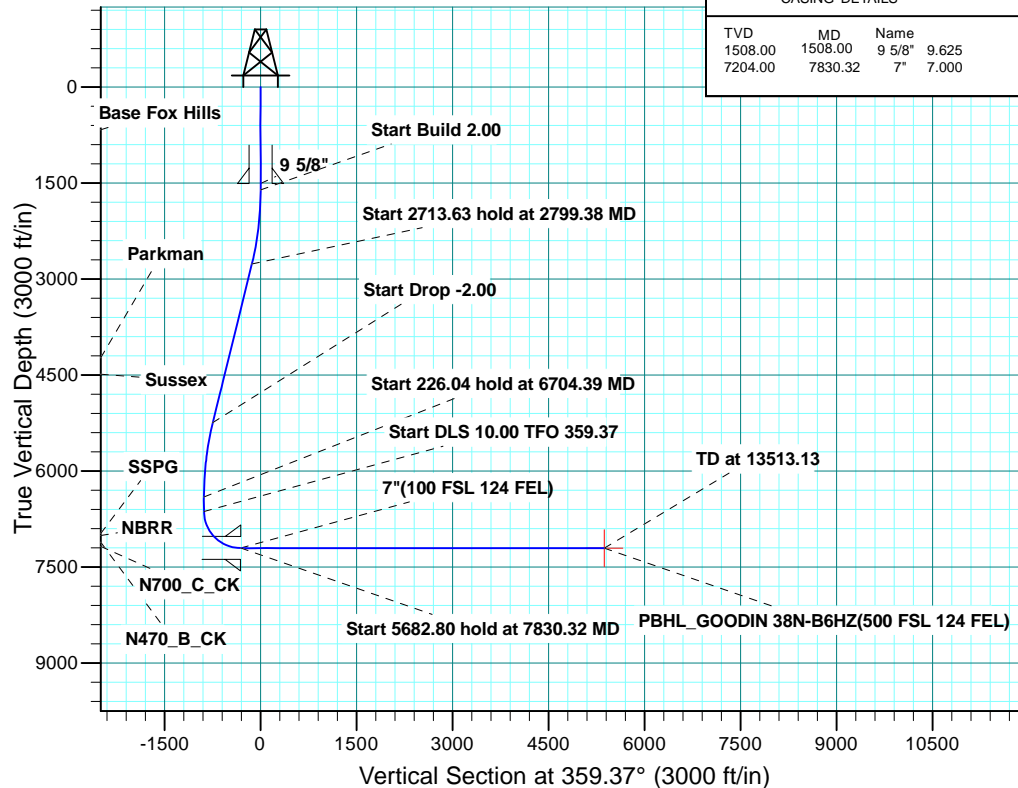


WELL DETAILS: GOODIN 38N-B6HZ								
GL 4980 & KB 17 @ 4997.00ft (ASSUMED)								
		+N-S 0.00	+E-W 0.00	Northing 1265651.05	Easting 3223308.79	Latitude 40.0598439	Longitude -104.7021950	
SECTION DETAILS								
MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSect
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1608.00	0.00	0.00	1608.00	0.00	0.00	0.00	0.00	0.00
2799.38	23.83	123.29	2765.33	-134.03	204.11	2.00	123.29	-136.26
5513.01	23.83	123.29	5247.67	-735.74	1120.48	0.00	0.00	-748.02
6704.39	0.00	0.00	6405.00	-869.77	1324.59	2.00	180.00	-884.28
6930.43	0.00	0.00	6631.04	-869.77	1324.59	0.00	0.00	-884.28
7830.32	89.99	359.37	7204.00	-296.95	1318.33	10.00	359.37	-311.43
13513.13	89.99	359.37	7205.00	5385.52	1256.24	0.00	0.00	5371.38
PBHL_GOODIN 38N-B6HZ(500 FSL 124 FEL)								
DESIGN TARGET DETAILS								
Name	TVD	+N-S	+E-W	Northing	Easting	Latitude	Longitude	Shape
PBHL	7205.00	5385.52	1256.24	1271047.64	3224516.52	40.0746280	-104.6977060	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
667.00	667.00	Base Fox Hills	0.00
4229.00	4399.42	Parkman	23.83
4487.00	4681.46	Sussex	23.83
6973.00	7296.86	SSPG	36.64
7007.00	7340.51	NBRR	41.01
7112.00	7501.23	N470_B_CK	57.08
7179.00	7660.55	N700_C_CK	73.01

CASING DETAILS			
TVD	MD	Name	
1508.00	1508.00	9 5/8"	9.625
7204.00	7830.32	7"	7.000



Plan: PLAN #1 PRELIMINARY (GOODIN 38N-B6HZ/OH)

Created By: R.Scott Date: 14:54, September 16 2014



**Scientific Drilling**

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**GOODIN 15-7HZ Pad**

**GOODIN 38N-B6HZ**

**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 38N-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 38N-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 38N-B6HZ, 410 FSL 1435 FEL			
<b>Well Position</b>	<b>+N/-S</b>	-1.10 ft	<b>Northing:</b>	1,265,651.05 usft
	<b>+E/-W</b>	150.03 ft	<b>Easting:</b>	3,223,308.79 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	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	359.37

<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	
1,708.00	0.00	0.00	1,708.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,944.28	24.73	123.29	2,906.26	-144.16	219.54	2.00	2.00	0.00	123.29	
5,476.94	24.73	123.29	5,206.74	-725.61	1,105.05	0.00	0.00	0.00	0.00	
6,713.22	0.00	0.00	6,405.00	-869.77	1,324.59	2.00	-2.00	0.00	180.00	
6,939.26	0.00	0.00	6,631.04	-869.77	1,324.59	0.00	0.00	0.00	0.00	
7,839.16	89.99	359.37	7,204.00	-296.95	1,318.33	10.00	10.00	-0.07	359.37	
13,521.97	89.99	359.37	7,205.00	5,385.51	1,256.24	0.00	0.00	0.00	0.00	PBHL_GOODIN 38N-

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<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 38N-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 (°/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
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
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,708.00	0.00	0.00	1,708.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
1,800.00	1.84	123.29	1,799.98	-0.81	1.23	-0.82	2.00	2.00	0.00
1,900.00	3.84	123.29	1,899.86	-3.53	5.38	-3.59	2.00	2.00	0.00
2,000.00	5.84	123.29	1,999.49	-8.16	12.43	-8.30	2.00	2.00	0.00
2,100.00	7.84	123.29	2,098.78	-14.70	22.38	-14.94	2.00	2.00	0.00
2,200.00	9.84	123.29	2,197.59	-23.13	35.23	-23.52	2.00	2.00	0.00
2,300.00	11.84	123.29	2,295.80	-33.45	50.95	-34.01	2.00	2.00	0.00
2,400.00	13.84	123.29	2,393.29	-45.65	69.52	-46.41	2.00	2.00	0.00
2,500.00	15.84	123.29	2,489.95	-59.71	90.93	-60.70	2.00	2.00	0.00
2,600.00	17.84	123.29	2,585.66	-75.61	115.15	-76.87	2.00	2.00	0.00
2,700.00	19.84	123.29	2,680.29	-93.33	142.14	-94.89	2.00	2.00	0.00
2,800.00	21.84	123.29	2,773.75	-112.86	171.87	-114.74	2.00	2.00	0.00
2,900.00	23.84	123.29	2,865.90	-134.16	204.32	-136.40	2.00	2.00	0.00
2,944.28	24.73	123.29	2,906.26	-144.16	219.54	-146.56	2.00	2.00	0.00
<b>Start 2532.66 hold at 2944.28 MD</b>									
3,000.00	24.73	123.29	2,956.88	-156.95	239.02	-159.57	0.00	0.00	0.00
3,100.00	24.73	123.29	3,047.71	-179.91	273.99	-182.91	0.00	0.00	0.00
3,200.00	24.73	123.29	3,138.54	-202.87	308.95	-206.25	0.00	0.00	0.00
3,300.00	24.73	123.29	3,229.37	-225.82	343.91	-229.59	0.00	0.00	0.00
3,400.00	24.73	123.29	3,320.20	-248.78	378.88	-252.93	0.00	0.00	0.00
3,500.00	24.73	123.29	3,411.04	-271.74	413.84	-276.28	0.00	0.00	0.00
3,600.00	24.73	123.29	3,501.87	-294.70	448.80	-299.62	0.00	0.00	0.00
3,700.00	24.73	123.29	3,592.70	-317.66	483.77	-322.96	0.00	0.00	0.00
3,800.00	24.73	123.29	3,683.53	-340.62	518.73	-346.30	0.00	0.00	0.00
3,900.00	24.73	123.29	3,774.36	-363.57	553.69	-369.64	0.00	0.00	0.00
4,000.00	24.73	123.29	3,865.20	-386.53	588.66	-392.98	0.00	0.00	0.00
4,100.00	24.73	123.29	3,956.03	-409.49	623.62	-416.32	0.00	0.00	0.00
4,200.00	24.73	123.29	4,046.86	-432.45	658.58	-439.66	0.00	0.00	0.00
4,300.00	24.73	123.29	4,137.69	-455.41	693.55	-463.01	0.00	0.00	0.00
4,400.00	24.73	123.29	4,228.53	-478.37	728.51	-486.35	0.00	0.00	0.00
4,400.52	24.73	123.29	4,229.00	-478.49	728.69	-486.47	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 38N-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 (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
<b>Parkman</b>									
4,500.00	24.73	123.29	4,319.36	-501.32	763.48	-509.69	0.00	0.00	0.00
4,600.00	24.73	123.29	4,410.19	-524.28	798.44	-533.03	0.00	0.00	0.00
4,684.56	24.73	123.29	4,487.00	-543.70	828.01	-552.77	0.00	0.00	0.00
<b>Sussex</b>									
4,700.00	24.73	123.29	4,501.02	-547.24	833.40	-556.37	0.00	0.00	0.00
4,800.00	24.73	123.29	4,591.85	-570.20	868.37	-579.71	0.00	0.00	0.00
4,900.00	24.73	123.29	4,682.69	-593.16	903.33	-603.05	0.00	0.00	0.00
5,000.00	24.73	123.29	4,773.52	-616.11	938.29	-626.39	0.00	0.00	0.00
5,100.00	24.73	123.29	4,864.35	-639.07	973.26	-649.74	0.00	0.00	0.00
5,200.00	24.73	123.29	4,955.18	-662.03	1,008.22	-673.08	0.00	0.00	0.00
5,300.00	24.73	123.29	5,046.01	-684.99	1,043.18	-696.42	0.00	0.00	0.00
5,400.00	24.73	123.29	5,136.85	-707.95	1,078.15	-719.76	0.00	0.00	0.00
5,476.94	24.73	123.29	5,206.74	-725.61	1,105.05	-737.72	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
5,500.00	24.26	123.29	5,227.72	-730.86	1,113.04	-743.05	2.00	-2.00	0.00
5,600.00	22.26	123.29	5,319.58	-752.54	1,146.05	-765.09	2.00	-2.00	0.00
5,700.00	20.26	123.29	5,412.77	-772.44	1,176.37	-785.33	2.00	-2.00	0.00
5,800.00	18.26	123.29	5,507.16	-790.55	1,203.95	-803.74	2.00	-2.00	0.00
5,900.00	16.26	123.29	5,602.65	-806.84	1,228.75	-820.30	2.00	-2.00	0.00
6,000.00	14.26	123.29	5,699.12	-821.29	1,250.76	-834.99	2.00	-2.00	0.00
6,100.00	12.26	123.29	5,796.45	-833.88	1,269.94	-847.80	2.00	-2.00	0.00
6,200.00	10.26	123.29	5,894.52	-844.60	1,286.26	-858.70	2.00	-2.00	0.00
6,300.00	8.26	123.29	5,993.21	-853.44	1,299.72	-867.68	2.00	-2.00	0.00
6,400.00	6.26	123.29	6,092.40	-860.38	1,310.29	-874.74	2.00	-2.00	0.00
6,500.00	4.26	123.29	6,191.97	-865.42	1,317.96	-879.86	2.00	-2.00	0.00
6,600.00	2.26	123.29	6,291.81	-868.54	1,322.72	-883.03	2.00	-2.00	0.00
6,700.00	0.26	123.29	6,391.78	-869.75	1,324.56	-884.26	2.00	-2.00	0.00
6,713.22	0.00	0.00	6,405.00	-869.77	1,324.59	-884.28	2.00	-2.00	0.00
<b>Start 226.04 hold at 6713.22 MD</b>									
6,800.00	0.00	0.00	6,491.78	-869.77	1,324.59	-884.28	0.00	0.00	0.00
6,900.00	0.00	0.00	6,591.78	-869.77	1,324.59	-884.28	0.00	0.00	0.00
6,939.26	0.00	0.00	6,631.04	-869.77	1,324.59	-884.28	0.00	0.00	0.00
<b>Start DLS 10.00 TFO 359.37</b>									
7,000.00	6.07	359.37	6,691.66	-866.55	1,324.55	-881.07	10.00	10.00	0.00
7,100.00	16.07	359.37	6,789.68	-847.37	1,324.35	-861.88	10.00	10.00	0.00
7,200.00	26.07	359.37	6,882.87	-811.46	1,323.95	-825.97	10.00	10.00	0.00
7,300.00	36.07	359.37	6,968.41	-759.92	1,323.39	-774.42	10.00	10.00	0.00
7,305.70	36.64	359.37	6,973.00	-756.54	1,323.35	-771.05	10.00	10.00	0.00
<b>SSPG</b>									
7,349.35	41.01	359.37	7,007.00	-729.18	1,323.05	-743.68	10.00	10.00	0.00
<b>NBRR</b>									
7,400.00	46.07	359.37	7,043.70	-694.30	1,322.67	-708.80	10.00	10.00	0.00
7,500.00	56.07	359.37	7,106.45	-616.61	1,321.82	-631.11	10.00	10.00	0.00
7,510.07	57.08	359.37	7,112.00	-608.21	1,321.73	-622.70	10.00	10.00	0.00
<b>N470_B_CK</b>									
7,600.00	66.07	359.37	7,154.76	-529.20	1,320.87	-543.69	10.00	10.00	0.00
7,669.39	73.01	359.37	7,179.00	-464.23	1,320.16	-478.72	10.00	10.00	0.00
<b>N700_C_CK</b>									
7,700.00	76.07	359.37	7,187.16	-434.74	1,319.84	-449.22	10.00	10.00	0.00
7,800.00	86.07	359.37	7,202.65	-336.08	1,318.76	-350.56	10.00	10.00	0.00
7,839.16	89.99	359.37	7,204.00	-296.95	1,318.33	-311.43	10.00	10.00	0.00

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<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 38N-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 (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
Start 5682.80 hold at 7839.16 MD - 7"(100 FSL 124 FEL)									
7,900.00	89.99	359.37	7,204.01	-236.11	1,317.67	-250.59	0.00	0.00	0.00
8,000.00	89.99	359.37	7,204.03	-136.12	1,316.57	-150.59	0.00	0.00	0.00
8,100.00	89.99	359.37	7,204.04	-36.13	1,315.48	-50.59	0.00	0.00	0.00
8,200.00	89.99	359.37	7,204.06	63.87	1,314.39	49.41	0.00	0.00	0.00
8,300.00	89.99	359.37	7,204.08	163.86	1,313.30	149.41	0.00	0.00	0.00
8,400.00	89.99	359.37	7,204.10	263.86	1,312.20	249.41	0.00	0.00	0.00
8,500.00	89.99	359.37	7,204.11	363.85	1,311.11	349.41	0.00	0.00	0.00
8,600.00	89.99	359.37	7,204.13	463.84	1,310.02	449.41	0.00	0.00	0.00
8,700.00	89.99	359.37	7,204.15	563.84	1,308.92	549.41	0.00	0.00	0.00
8,800.00	89.99	359.37	7,204.17	663.83	1,307.83	649.41	0.00	0.00	0.00
8,900.00	89.99	359.37	7,204.19	763.83	1,306.74	749.41	0.00	0.00	0.00
9,000.00	89.99	359.37	7,204.20	863.82	1,305.65	849.41	0.00	0.00	0.00
9,100.00	89.99	359.37	7,204.22	963.81	1,304.55	949.41	0.00	0.00	0.00
9,200.00	89.99	359.37	7,204.24	1,063.81	1,303.46	1,049.41	0.00	0.00	0.00
9,300.00	89.99	359.37	7,204.26	1,163.80	1,302.37	1,149.41	0.00	0.00	0.00
9,400.00	89.99	359.37	7,204.27	1,263.80	1,301.28	1,249.41	0.00	0.00	0.00
9,500.00	89.99	359.37	7,204.29	1,363.79	1,300.18	1,349.41	0.00	0.00	0.00
9,600.00	89.99	359.37	7,204.31	1,463.78	1,299.09	1,449.41	0.00	0.00	0.00
9,700.00	89.99	359.37	7,204.33	1,563.78	1,298.00	1,549.41	0.00	0.00	0.00
9,800.00	89.99	359.37	7,204.34	1,663.77	1,296.90	1,649.41	0.00	0.00	0.00
9,900.00	89.99	359.37	7,204.36	1,763.77	1,295.81	1,749.41	0.00	0.00	0.00
10,000.00	89.99	359.37	7,204.38	1,863.76	1,294.72	1,849.41	0.00	0.00	0.00
10,100.00	89.99	359.37	7,204.40	1,963.75	1,293.63	1,949.41	0.00	0.00	0.00
10,200.00	89.99	359.37	7,204.41	2,063.75	1,292.53	2,049.41	0.00	0.00	0.00
10,300.00	89.99	359.37	7,204.43	2,163.74	1,291.44	2,149.41	0.00	0.00	0.00
10,400.00	89.99	359.37	7,204.45	2,263.74	1,290.35	2,249.41	0.00	0.00	0.00
10,500.00	89.99	359.37	7,204.47	2,363.73	1,289.26	2,349.41	0.00	0.00	0.00
10,600.00	89.99	359.37	7,204.48	2,463.72	1,288.16	2,449.41	0.00	0.00	0.00
10,700.00	89.99	359.37	7,204.50	2,563.72	1,287.07	2,549.41	0.00	0.00	0.00
10,800.00	89.99	359.37	7,204.52	2,663.71	1,285.98	2,649.41	0.00	0.00	0.00
10,900.00	89.99	359.37	7,204.54	2,763.71	1,284.89	2,749.41	0.00	0.00	0.00
11,000.00	89.99	359.37	7,204.56	2,863.70	1,283.79	2,849.41	0.00	0.00	0.00
11,100.00	89.99	359.37	7,204.57	2,963.69	1,282.70	2,949.41	0.00	0.00	0.00
11,200.00	89.99	359.37	7,204.59	3,063.69	1,281.61	3,049.41	0.00	0.00	0.00
11,300.00	89.99	359.37	7,204.61	3,163.68	1,280.51	3,149.41	0.00	0.00	0.00
11,400.00	89.99	359.37	7,204.63	3,263.68	1,279.42	3,249.41	0.00	0.00	0.00
11,500.00	89.99	359.37	7,204.64	3,363.67	1,278.33	3,349.41	0.00	0.00	0.00
11,600.00	89.99	359.37	7,204.66	3,463.66	1,277.24	3,449.41	0.00	0.00	0.00
11,700.00	89.99	359.37	7,204.68	3,563.66	1,276.14	3,549.41	0.00	0.00	0.00
11,800.00	89.99	359.37	7,204.70	3,663.65	1,275.05	3,649.41	0.00	0.00	0.00
11,900.00	89.99	359.37	7,204.71	3,763.65	1,273.96	3,749.41	0.00	0.00	0.00
12,000.00	89.99	359.37	7,204.73	3,863.64	1,272.87	3,849.41	0.00	0.00	0.00
12,100.00	89.99	359.37	7,204.75	3,963.64	1,271.77	3,949.41	0.00	0.00	0.00
12,200.00	89.99	359.37	7,204.77	4,063.63	1,270.68	4,049.41	0.00	0.00	0.00
12,300.00	89.99	359.37	7,204.78	4,163.62	1,269.59	4,149.41	0.00	0.00	0.00
12,400.00	89.99	359.37	7,204.80	4,263.62	1,268.50	4,249.41	0.00	0.00	0.00
12,500.00	89.99	359.37	7,204.82	4,363.61	1,267.40	4,349.41	0.00	0.00	0.00
12,600.00	89.99	359.37	7,204.84	4,463.61	1,266.31	4,449.41	0.00	0.00	0.00
12,700.00	89.99	359.37	7,204.86	4,563.60	1,265.22	4,549.41	0.00	0.00	0.00
12,800.00	89.99	359.37	7,204.87	4,663.59	1,264.12	4,649.41	0.00	0.00	0.00
12,900.00	89.99	359.37	7,204.89	4,763.59	1,263.03	4,749.41	0.00	0.00	0.00
13,000.00	89.99	359.37	7,204.91	4,863.58	1,261.94	4,849.41	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well GOODIN 38N-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 38N-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 (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
13,100.00	89.99	359.37	7,204.93	4,963.58	1,260.85	4,949.41	0.00	0.00	0.00
13,200.00	89.99	359.37	7,204.94	5,063.57	1,259.75	5,049.41	0.00	0.00	0.00
13,300.00	89.99	359.37	7,204.96	5,163.56	1,258.66	5,149.41	0.00	0.00	0.00
13,400.00	89.99	359.37	7,204.98	5,263.56	1,257.57	5,249.41	0.00	0.00	0.00
13,500.00	89.99	359.37	7,205.00	5,363.55	1,256.48	5,349.41	0.00	0.00	0.00
13,521.97	89.99	359.37	7,205.00	5,385.51	1,256.24	5,371.38	0.00	0.00	0.00
TD at 13521.96 - PBHL_GOODIN 38N-B6HZ(500 FSL 124 FEL)									

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL_GOODIN 38N-B6 - plan hits target center - Point	0.00	0.00	7,205.00	5,385.51	1,256.24	1,271,047.64	3,224,516.52	40.0746280	-104.6977060

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	
7,839.16	7,204.00	7"(100 FSL 124 FEL)	7.000	8.750	

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
667.00	667.00	Base Fox Hills			
4,400.52	4,229.00	Parkman			
4,684.56	4,487.00	Sussex			
7,305.70	6,973.00	SSPG			
7,349.35	7,007.00	NBRR			
7,510.07	7,112.00	N470_B_CK			
7,669.39	7,179.00	N700_C_CK			

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,708.00	1,708.00	0.00	0.00	Start Build 2.00
2,944.28	2,906.26	-144.16	219.54	Start 2532.66 hold at 2944.28 MD
5,476.94	5,206.74	-725.61	1,105.05	Start Drop -2.00
6,713.22	6,405.00	-869.77	1,324.59	Start 226.04 hold at 6713.22 MD
6,939.26	6,631.04	-869.77	1,324.59	Start DLS 10.00 TFO 359.37
7,839.16	7,204.00	-296.95	1,318.33	Start 5682.80 hold at 7839.16 MD
13,521.97	7,205.00	5,385.51	1,256.24	TD at 13521.96