



Project: COLORADO NORTHERN ZONE - 83  
Site: GOODIN 15-7HZ Pad  
Well: GOODIN 36N-B6HZ  
Wellbore: OH  
Design: PLAN #1 PRELIMINARY

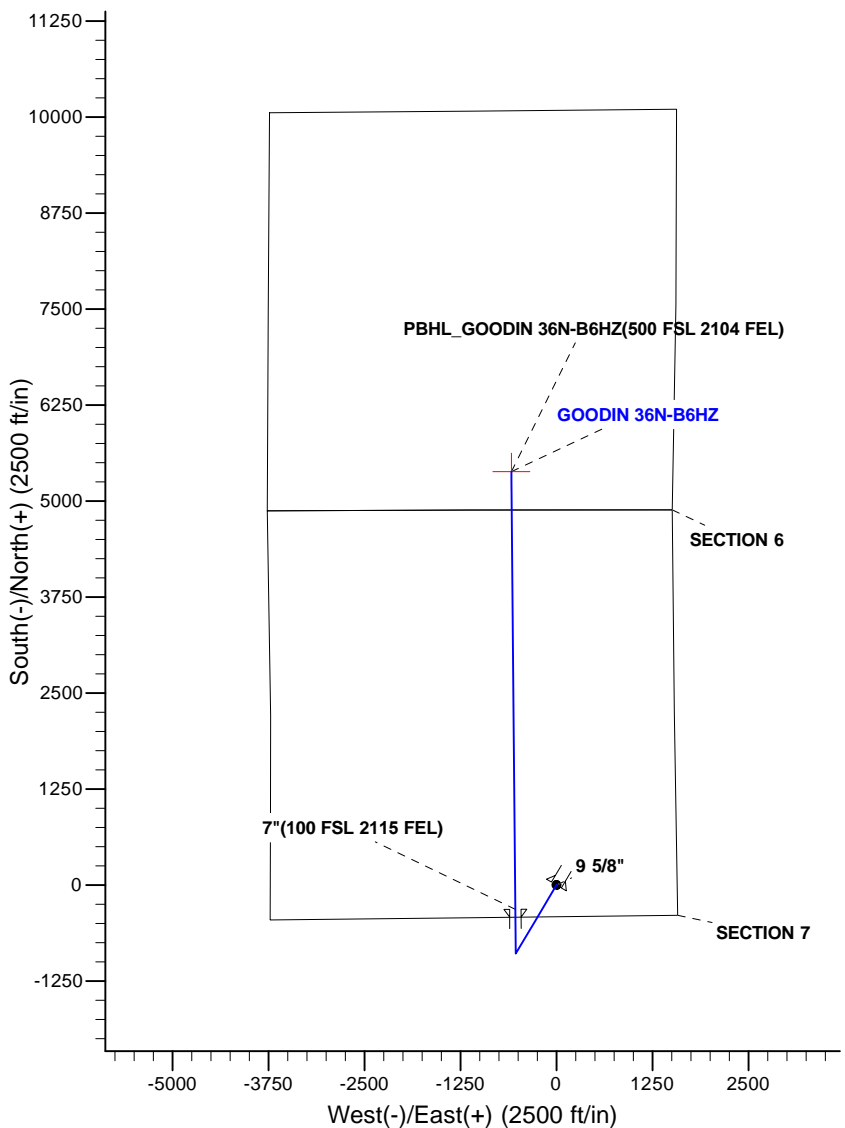
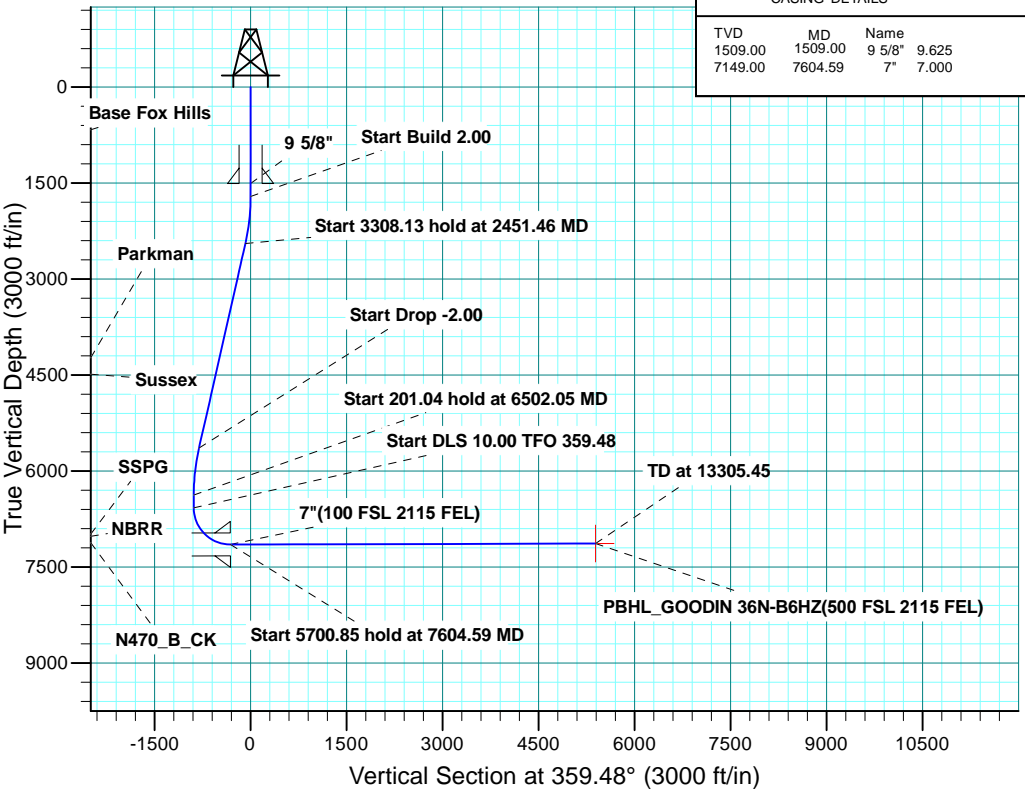


WELL DETAILS: GOODIN 36N-B6HZ									
GL 4981 & KB 17 @ 4998.00ft (ASSUMED)									
		+N/-S		+E/-W		Northing	Easting	Latitude	Longitude
		0.00		0.00		1265650.92	3223173.87	40.0598469	-104.7026770
SECTION DETAILS									
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1709.00	0.00	0.00	1709.00	0.00	0.00	0.00	0.00	0.00	
2451.46	14.85	210.77	2443.18	-82.20	-48.95	2.00	210.77	-81.75	
5759.59	14.85	210.77	5640.82	-810.62	-482.73	0.00	0.00	-806.20	
6502.05	0.00	0.00	6375.00	-892.82	-531.68	2.00	180.00	-887.96	
6703.09	0.00	0.00	6576.04	-892.82	-531.68	0.00	0.00	-887.96	
7604.59	90.15	359.48	7149.00	-318.38	-536.93	10.00	359.48	-313.49	
13305.46	90.15	359.48	7134.00	5382.23	-589.08	0.00	0.00	5387.35	PBHL_GOODIN 36N-B6HZ(500 FSL 2104 FEL)
DESIGN TARGET DETAILS									
Name	TVD	+N/-S		+E/-W		Northing	Easting	Latitude	Longitude
PBHL 7134.00		5382.23		-589.08		1271027.62	3222536.42	40.0746220	-104.7047820
- 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	4300.02	Parkman	14.85
4488.00	4566.93	Sussex	14.85
6985.00	7158.51	SSPG	45.54
7019.00	7209.43	NBRR	50.63
7122.00	7426.50	N470_B_CK	72.34

CASING DETAILS			
TVD	MD	Name	
1509.00	1509.00	9 5/8"	9.625
7149.00	7604.59	7"	7.000





Scientific Drilling

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**GOODIN 15-7HZ Pad**

**GOODIN 36N-B6HZ**

**OH**

**Plan: PLAN #1 PRELIMINARY**

## **Standard Planning Report**

**22 September, 2014**

<b>Database:</b>	Denver Sales	<b>Local Co-ordinate Reference:</b>	Well GOODIN 36N-B6HZ
<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-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 36N-B6HZ, 413 FSL 1570 FEL			
<b>Well Position</b>	<b>+N/-S</b>	-0.03 ft	<b>Northing:</b>	1,265,650.91 usft
	<b>+E/-W</b>	15.12 ft	<b>Easting:</b>	3,223,173.87 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	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	359.48

<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	
1,709.00	0.00	0.00	1,709.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,451.46	14.85	210.77	2,443.18	-82.20	-48.95	2.00	2.00	0.00	210.77	
5,759.59	14.85	210.77	5,640.82	-810.62	-482.73	0.00	0.00	0.00	0.00	
6,502.05	0.00	0.00	6,375.00	-892.82	-531.68	2.00	-2.00	0.00	180.00	
6,703.09	0.00	0.00	6,576.04	-892.82	-531.68	0.00	0.00	0.00	0.00	
7,604.59	90.15	359.48	7,149.00	-318.38	-536.93	10.00	10.00	-0.06	359.48	
13,305.46	90.15	359.48	7,134.00	5,382.23	-589.08	0.00	0.00	0.00	0.00	PBHL_GOODIN 36N-

<b>Database:</b>	Denver Sales	<b>Local Co-ordinate Reference:</b>	Well GOODIN 36N-B6HZ
<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-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
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
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,709.00	0.00	0.00	1,709.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
1,800.00	1.82	210.77	1,799.98	-1.24	-0.74	-1.23	2.00	2.00	0.00
1,900.00	3.82	210.77	1,899.86	-5.47	-3.26	-5.44	2.00	2.00	0.00
2,000.00	5.82	210.77	1,999.50	-12.69	-7.56	-12.62	2.00	2.00	0.00
2,100.00	7.82	210.77	2,098.79	-22.89	-13.63	-22.77	2.00	2.00	0.00
2,200.00	9.82	210.77	2,197.60	-36.06	-21.48	-35.87	2.00	2.00	0.00
2,300.00	11.82	210.77	2,295.82	-52.19	-31.08	-51.91	2.00	2.00	0.00
2,400.00	13.82	210.77	2,393.32	-71.26	-42.43	-70.87	2.00	2.00	0.00
2,451.46	14.85	210.77	2,443.18	-82.20	-48.95	-81.75	2.00	2.00	0.00
<b>Start 3308.13 hold at 2451.46 MD</b>									
2,500.00	14.85	210.77	2,490.10	-92.89	-55.32	-92.38	0.00	0.00	0.00
2,600.00	14.85	210.77	2,586.76	-114.91	-68.43	-114.28	0.00	0.00	0.00
2,700.00	14.85	210.77	2,683.42	-136.93	-81.54	-136.18	0.00	0.00	0.00
2,800.00	14.85	210.77	2,780.08	-158.95	-94.65	-158.08	0.00	0.00	0.00
2,900.00	14.85	210.77	2,876.74	-180.97	-107.77	-179.98	0.00	0.00	0.00
3,000.00	14.85	210.77	2,973.40	-202.98	-120.88	-201.88	0.00	0.00	0.00
3,100.00	14.85	210.77	3,070.06	-225.00	-133.99	-223.78	0.00	0.00	0.00
3,200.00	14.85	210.77	3,166.72	-247.02	-147.10	-245.68	0.00	0.00	0.00
3,300.00	14.85	210.77	3,263.38	-269.04	-160.22	-267.58	0.00	0.00	0.00
3,400.00	14.85	210.77	3,360.04	-291.06	-173.33	-289.48	0.00	0.00	0.00
3,500.00	14.85	210.77	3,456.70	-313.08	-186.44	-311.37	0.00	0.00	0.00
3,600.00	14.85	210.77	3,553.36	-335.10	-199.55	-333.27	0.00	0.00	0.00
3,700.00	14.85	210.77	3,650.02	-357.12	-212.67	-355.17	0.00	0.00	0.00
3,800.00	14.85	210.77	3,746.68	-379.14	-225.78	-377.07	0.00	0.00	0.00
3,900.00	14.85	210.77	3,843.34	-401.16	-238.89	-398.97	0.00	0.00	0.00
4,000.00	14.85	210.77	3,940.00	-423.17	-252.00	-420.87	0.00	0.00	0.00
4,100.00	14.85	210.77	4,036.66	-445.19	-265.12	-442.77	0.00	0.00	0.00
4,200.00	14.85	210.77	4,133.32	-467.21	-278.23	-464.67	0.00	0.00	0.00
4,300.00	14.85	210.77	4,229.98	-489.23	-291.34	-486.57	0.00	0.00	0.00
4,300.02	14.85	210.77	4,230.00	-489.24	-291.34	-486.57	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 4981 & KB 17 @ 4998.00ft (ASSUMED)
<b>Site:</b>	GOODIN 15-7HZ Pad	<b>North Reference:</b>	True
<b>Well:</b>	GOODIN 36N-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	14.85	210.77	4,326.64	-511.25	-304.45	-508.47	0.00	0.00	0.00
4,500.00	14.85	210.77	4,423.30	-533.27	-317.57	-530.37	0.00	0.00	0.00
4,566.93	14.85	210.77	4,488.00	-548.01	-326.34	-545.02	0.00	0.00	0.00
<b>Sussex</b>									
4,600.00	14.85	210.77	4,519.96	-555.29	-330.68	-552.26	0.00	0.00	0.00
4,700.00	14.85	210.77	4,616.62	-577.31	-343.79	-574.16	0.00	0.00	0.00
4,800.00	14.85	210.77	4,713.28	-599.33	-356.90	-596.06	0.00	0.00	0.00
4,900.00	14.85	210.77	4,809.94	-621.35	-370.02	-617.96	0.00	0.00	0.00
5,000.00	14.85	210.77	4,906.60	-643.36	-383.13	-639.86	0.00	0.00	0.00
5,100.00	14.85	210.77	5,003.26	-665.38	-396.24	-661.76	0.00	0.00	0.00
5,200.00	14.85	210.77	5,099.93	-687.40	-409.35	-683.66	0.00	0.00	0.00
5,300.00	14.85	210.77	5,196.59	-709.42	-422.47	-705.56	0.00	0.00	0.00
5,400.00	14.85	210.77	5,293.25	-731.44	-435.58	-727.46	0.00	0.00	0.00
5,500.00	14.85	210.77	5,389.91	-753.46	-448.69	-749.36	0.00	0.00	0.00
5,600.00	14.85	210.77	5,486.57	-775.48	-461.80	-771.26	0.00	0.00	0.00
5,700.00	14.85	210.77	5,583.23	-797.50	-474.92	-793.15	0.00	0.00	0.00
5,759.59	14.85	210.77	5,640.82	-810.62	-482.73	-806.20	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
5,800.00	14.04	210.77	5,679.96	-819.28	-487.89	-814.82	2.00	-2.00	0.00
5,900.00	12.04	210.77	5,777.38	-838.67	-499.43	-834.10	2.00	-2.00	0.00
6,000.00	10.04	210.77	5,875.52	-855.12	-509.23	-850.46	2.00	-2.00	0.00
6,100.00	8.04	210.77	5,974.27	-868.62	-517.27	-863.89	2.00	-2.00	0.00
6,200.00	6.04	210.77	6,073.51	-879.15	-523.54	-874.36	2.00	-2.00	0.00
6,300.00	4.04	210.77	6,173.12	-886.70	-528.04	-881.87	2.00	-2.00	0.00
6,400.00	2.04	210.77	6,272.98	-891.26	-530.75	-886.41	2.00	-2.00	0.00
6,500.00	0.04	210.77	6,372.95	-892.82	-531.68	-887.96	2.00	-2.00	0.00
6,502.05	0.00	0.00	6,375.00	-892.82	-531.68	-887.96	2.00	-2.00	0.00
<b>Start 201.04 hold at 6502.05 MD</b>									
6,600.00	0.00	0.00	6,472.95	-892.82	-531.68	-887.96	0.00	0.00	0.00
6,700.00	0.00	0.00	6,572.95	-892.82	-531.68	-887.96	0.00	0.00	0.00
6,703.09	0.00	0.00	6,576.04	-892.82	-531.68	-887.96	0.00	0.00	0.00
<b>Start DLS 10.00 TFO 359.48</b>									
6,800.00	9.69	359.48	6,672.49	-884.64	-531.75	-879.78	10.00	10.00	0.00
6,900.00	19.69	359.48	6,769.10	-859.32	-531.99	-854.45	10.00	10.00	0.00
7,000.00	29.69	359.48	6,859.84	-817.60	-532.37	-812.73	10.00	10.00	0.00
7,100.00	39.69	359.48	6,941.96	-760.76	-532.89	-755.89	10.00	10.00	0.00
7,158.51	45.54	359.48	6,985.00	-721.16	-533.25	-716.29	10.00	10.00	0.00
<b>SSPG</b>									
7,200.00	49.69	359.48	7,012.96	-690.52	-533.53	-685.65	10.00	10.00	0.00
7,209.43	50.63	359.48	7,019.00	-683.28	-533.60	-678.41	10.00	10.00	0.00
<b>NBRR</b>									
7,300.00	59.69	359.48	7,070.69	-609.02	-534.28	-604.15	10.00	10.00	0.00
7,400.00	69.69	359.48	7,113.38	-518.74	-535.10	-513.86	10.00	10.00	0.00
7,426.50	72.34	359.48	7,122.00	-493.68	-535.33	-488.81	10.00	10.00	0.00
<b>N470_B_CK</b>									
7,500.00	79.69	359.48	7,139.75	-422.41	-535.98	-417.53	10.00	10.00	0.00
7,600.00	89.69	359.48	7,148.99	-322.97	-536.89	-318.09	10.00	10.00	0.00
7,604.59	90.15	359.48	7,149.00	-318.38	-536.93	-313.50	10.00	10.00	0.00
<b>Start 5700.85 hold at 7604.59 MD - 7"(100 FSL 2115 FEL)</b>									
7,700.00	90.15	359.48	7,148.75	-222.98	-537.81	-218.09	0.00	0.00	0.00
7,800.00	90.15	359.48	7,148.48	-122.98	-538.72	-118.09	0.00	0.00	0.00
7,900.00	90.15	359.48	7,148.22	-22.99	-539.64	-18.09	0.00	0.00	0.00
8,000.00	90.15	359.48	7,147.96	77.01	-540.55	81.91	0.00	0.00	0.00

<b>Database:</b>	Denver Sales	<b>Local Co-ordinate Reference:</b>	Well GOODIN 36N-B6HZ
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<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-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	90.15	359.48	7,147.69	177.00	-541.47	181.91	0.00	0.00	0.00
8,200.00	90.15	359.48	7,147.43	277.00	-542.38	281.91	0.00	0.00	0.00
8,300.00	90.15	359.48	7,147.17	377.00	-543.30	381.91	0.00	0.00	0.00
8,400.00	90.15	359.48	7,146.90	476.99	-544.21	481.91	0.00	0.00	0.00
8,500.00	90.15	359.48	7,146.64	576.99	-545.12	581.91	0.00	0.00	0.00
8,600.00	90.15	359.48	7,146.38	676.98	-546.04	681.91	0.00	0.00	0.00
8,700.00	90.15	359.48	7,146.11	776.98	-546.95	781.91	0.00	0.00	0.00
8,800.00	90.15	359.48	7,145.85	876.97	-547.87	881.91	0.00	0.00	0.00
8,900.00	90.15	359.48	7,145.59	976.97	-548.78	981.91	0.00	0.00	0.00
9,000.00	90.15	359.48	7,145.33	1,076.96	-549.70	1,081.91	0.00	0.00	0.00
9,100.00	90.15	359.48	7,145.06	1,176.96	-550.61	1,181.91	0.00	0.00	0.00
9,200.00	90.15	359.48	7,144.80	1,276.95	-551.53	1,281.91	0.00	0.00	0.00
9,300.00	90.15	359.48	7,144.54	1,376.95	-552.44	1,381.91	0.00	0.00	0.00
9,400.00	90.15	359.48	7,144.27	1,476.95	-553.36	1,481.91	0.00	0.00	0.00
9,500.00	90.15	359.48	7,144.01	1,576.94	-554.27	1,581.91	0.00	0.00	0.00
9,600.00	90.15	359.48	7,143.75	1,676.94	-555.19	1,681.91	0.00	0.00	0.00
9,700.00	90.15	359.48	7,143.48	1,776.93	-556.10	1,781.91	0.00	0.00	0.00
9,800.00	90.15	359.48	7,143.22	1,876.93	-557.02	1,881.91	0.00	0.00	0.00
9,900.00	90.15	359.48	7,142.96	1,976.92	-557.93	1,981.91	0.00	0.00	0.00
10,000.00	90.15	359.48	7,142.69	2,076.92	-558.84	2,081.91	0.00	0.00	0.00
10,100.00	90.15	359.48	7,142.43	2,176.91	-559.76	2,181.90	0.00	0.00	0.00
10,200.00	90.15	359.48	7,142.17	2,276.91	-560.67	2,281.90	0.00	0.00	0.00
10,300.00	90.15	359.48	7,141.91	2,376.91	-561.59	2,381.90	0.00	0.00	0.00
10,400.00	90.15	359.48	7,141.64	2,476.90	-562.50	2,481.90	0.00	0.00	0.00
10,500.00	90.15	359.48	7,141.38	2,576.90	-563.42	2,581.90	0.00	0.00	0.00
10,600.00	90.15	359.48	7,141.12	2,676.89	-564.33	2,681.90	0.00	0.00	0.00
10,700.00	90.15	359.48	7,140.85	2,776.89	-565.25	2,781.90	0.00	0.00	0.00
10,800.00	90.15	359.48	7,140.59	2,876.88	-566.16	2,881.90	0.00	0.00	0.00
10,900.00	90.15	359.48	7,140.33	2,976.88	-567.08	2,981.90	0.00	0.00	0.00
11,000.00	90.15	359.48	7,140.06	3,076.87	-567.99	3,081.90	0.00	0.00	0.00
11,100.00	90.15	359.48	7,139.80	3,176.87	-568.91	3,181.90	0.00	0.00	0.00
11,200.00	90.15	359.48	7,139.54	3,276.86	-569.82	3,281.90	0.00	0.00	0.00
11,300.00	90.15	359.48	7,139.28	3,376.86	-570.74	3,381.90	0.00	0.00	0.00
11,400.00	90.15	359.48	7,139.01	3,476.86	-571.65	3,481.90	0.00	0.00	0.00
11,500.00	90.15	359.48	7,138.75	3,576.85	-572.57	3,581.90	0.00	0.00	0.00
11,600.00	90.15	359.48	7,138.49	3,676.85	-573.48	3,681.90	0.00	0.00	0.00
11,700.00	90.15	359.48	7,138.22	3,776.84	-574.39	3,781.90	0.00	0.00	0.00
11,800.00	90.15	359.48	7,137.96	3,876.84	-575.31	3,881.90	0.00	0.00	0.00
11,900.00	90.15	359.48	7,137.70	3,976.83	-576.22	3,981.90	0.00	0.00	0.00
12,000.00	90.15	359.48	7,137.43	4,076.83	-577.14	4,081.90	0.00	0.00	0.00
12,100.00	90.15	359.48	7,137.17	4,176.82	-578.05	4,181.90	0.00	0.00	0.00
12,200.00	90.15	359.48	7,136.91	4,276.82	-578.97	4,281.90	0.00	0.00	0.00
12,300.00	90.15	359.48	7,136.64	4,376.81	-579.88	4,381.90	0.00	0.00	0.00
12,400.00	90.15	359.48	7,136.38	4,476.81	-580.80	4,481.90	0.00	0.00	0.00
12,500.00	90.15	359.48	7,136.12	4,576.81	-581.71	4,581.90	0.00	0.00	0.00
12,600.00	90.15	359.48	7,135.86	4,676.80	-582.63	4,681.90	0.00	0.00	0.00
12,700.00	90.15	359.48	7,135.59	4,776.80	-583.54	4,781.90	0.00	0.00	0.00
12,800.00	90.15	359.48	7,135.33	4,876.79	-584.46	4,881.90	0.00	0.00	0.00
12,900.00	90.15	359.48	7,135.07	4,976.79	-585.37	4,981.90	0.00	0.00	0.00
13,000.00	90.15	359.48	7,134.80	5,076.78	-586.29	5,081.89	0.00	0.00	0.00
13,100.00	90.15	359.48	7,134.54	5,176.78	-587.20	5,181.89	0.00	0.00	0.00
13,200.00	90.15	359.48	7,134.28	5,276.77	-588.11	5,281.89	0.00	0.00	0.00
13,300.00	90.15	359.48	7,134.01	5,376.77	-589.03	5,381.89	0.00	0.00	0.00
13,305.45	90.15	359.48	7,134.00	5,382.22	-589.08	5,387.34	0.00	0.00	0.00

<b>Database:</b>	Denver Sales	<b>Local Co-ordinate Reference:</b>	Well GOODIN 36N-B6HZ
<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-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)
<b>TD at 13305.45</b>									
13,305.46	90.15	359.48	7,134.00	5,382.23	-589.08	5,387.35	0.00	0.00	0.00
<b>PBHL_GOODIN 36N-B6HZ(500FSL 2104 FEL)</b>									

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-B6	0.00	0.00	7,134.00	5,382.23	-589.08	1,271,027.62	3,222,536.43	40.0746220	-104.7047820
- 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				
7,604.59	7,149.00	7"(100 FSL 2115 FEL)		7.000	8.750				

Formations									
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)				
668.00	667.00	Base Fox Hills							
4,300.02	4,229.00	Parkman							
4,566.93	4,487.00	Sussex							
7,158.51	6,984.00	SSPG							
7,209.43	7,018.00	NBRR							
7,426.50	7,121.00	N470_B_CK							

Plan Annotations									
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment					
		+N/-S (ft)	+E/-W (ft)						
1,709.00	1,709.00	0.00	0.00	Start Build 2.00					
2,451.46	2,443.18	-82.20	-48.95	Start 3308.13 hold at 2451.46 MD					
5,759.59	5,640.82	-810.62	-482.73	Start Drop -2.00					
6,502.05	6,375.00	-892.82	-531.68	Start 201.04 hold at 6502.05 MD					
6,703.09	6,576.04	-892.82	-531.68	Start DLS 10.00 TFO 359.48					
7,604.59	7,149.00	-318.38	-536.93	Start 5700.85 hold at 7604.59 MD					
13,305.45	7,134.00	5,382.22	-589.08	TD at 13305.45					