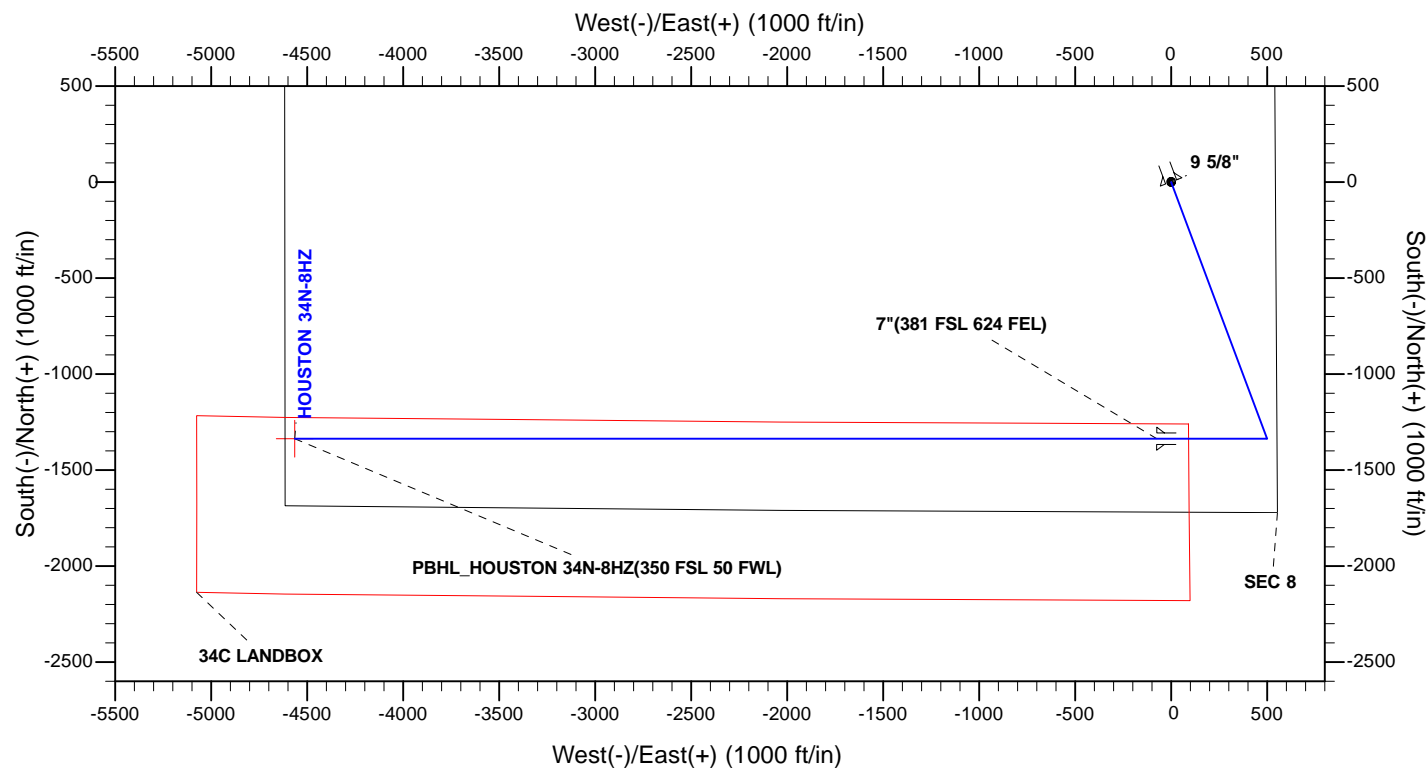
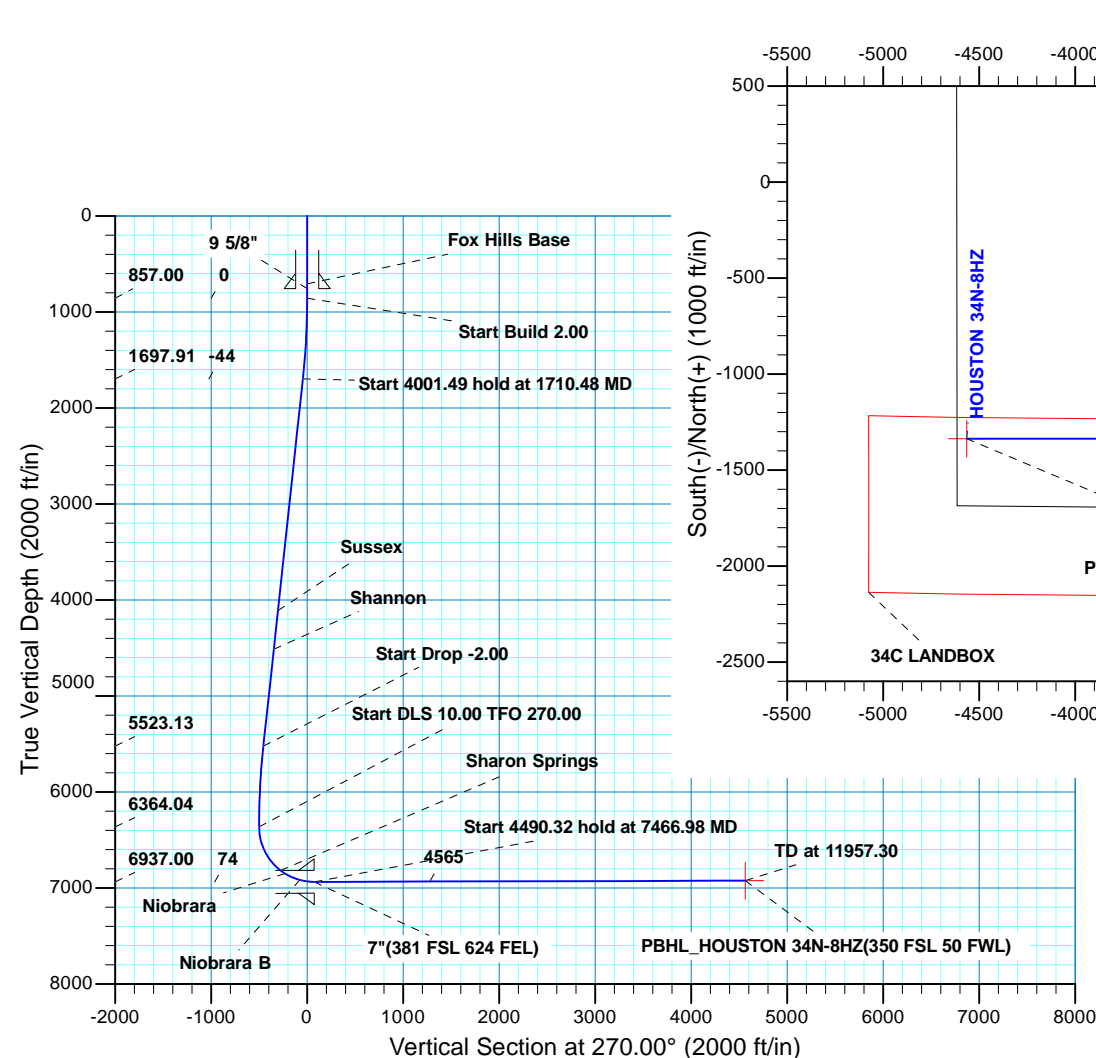


WELL DETAILS: HOUSTON 34N-8HZ										
GL 4806 & KB 17 @ 4823.00ft (ASSUMED)										
+N/-S 0.00		+E/-W 0.00		Northing 1330026.47		Easting 3165629.00		Latitude 40.2378000		Longitude -104.9067190
SECTION DETAILS										
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target	
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
857.00	0.00	0.00	857.00	0.00	0.00	0.00	0.00	0.00	0.00	
1710.48	17.07	159.49	1697.91	-118.20	44.22	2.00	159.49	-44.22		
5711.97	17.07	159.49	5523.13	-1218.30	455.78	0.00	0.00	-455.78		
6565.45	0.00	0.00	6364.04	-1336.50	500.00	2.00	180.00	-500.00		
7466.98	90.15	270.00	6937.00	-1336.50	-74.49	10.00	270.00	74.49		
11957.30	90.15	270.00	6925.00	-1336.50	-4564.79	0.00	0.00	4564.79	PBHL_HOUSTON 34N-8HZ(350 FSL 50 FWL)	

CASING DETAILS			
TVD	MD	Name	Size
757.00	757.00	9 5/8"	9.625
6937.00	7466.98	7"	7.000

FORMATION TOP DETAILS			
TVDPPath	MDPath	Formation	Inc
707.00	707.00	Fox Hills Base	0.00
4111.00	4234.77	Sussex	17.07
4514.00	4656.34	Shannon	17.07
6818.00	7089.47	Sharon Springs	52.40
6850.00	7145.57	Niobrara	58.01
6917.00	7313.63	Niobrara B	74.82





**Scientific Drilling**

# **US ROCKIES REGION PLANNING**

**COLORADO NORTHERN ZONE - 83**

**HOUSTON 9-8HZ PAD**

**HOUSTON 34N-8HZ**

**OH**

**Plan: PLAN #1 PRELIMINARY**

## **Standard Planning Report**

**13 January, 2014**

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well HOUSTON 34N-8HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4806 & KB 17 @ 4823.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4806 & KB 17 @ 4823.00ft (ASSUMED)
<b>Site:</b>	HOUSTON 9-8HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	HOUSTON 34N-8HZ	<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>	HOUSTON 9-8HZ PAD, SECTION 8 T3N R67W			
<b>Site Position:</b>		<b>Northing:</b>	1,330,057.10 usft	<b>Latitude:</b> 40.2378850
<b>From:</b>	Lat/Long	<b>Easting:</b>	3,165,577.42 usft	<b>Longitude:</b> -104.9069030
<b>Position Uncertainty:</b>	0.00 ft	<b>Slot Radius:</b>	13.200 in	<b>Grid Convergence:</b> 0.38 °

<b>Well</b>	HOUSTON 34N-8HZ, 1719 FSL 543 FEL			
<b>Well Position</b>	<b>+N/-S</b>	-30.97 ft	<b>Northing:</b>	1,330,026.47 usft
	<b>+E/-W</b>	51.37 ft	<b>Easting:</b>	3,165,629.00 usft
<b>Position Uncertainty</b>	0.00 ft	<b>Wellhead Elevation:</b>	0.00 ft	<b>Ground Level:</b> 4,806.00 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	2013/10/17	8.65	66.81	52,713

<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	270.00

<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	
857.00	0.00	0.00	857.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,710.48	17.07	159.49	1,697.91	-118.20	44.22	2.00	2.00	0.00	159.49	
5,711.97	17.07	159.49	5,523.13	-1,218.30	455.78	0.00	0.00	0.00	0.00	
6,565.45	0.00	0.00	6,364.04	-1,336.50	500.00	2.00	-2.00	0.00	180.00	
7,466.98	90.15	270.00	6,937.00	-1,336.50	-74.49	10.00	10.00	-9.98	270.00	
11,957.30	90.15	270.00	6,925.00	-1,336.50	-4,564.79	0.00	0.00	0.00	0.00	PBHL_HOUSTON 34

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well HOUSTON 34N-8HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4806 & KB 17 @ 4823.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4806 & KB 17 @ 4823.00ft (ASSUMED)
<b>Site:</b>	HOUSTON 9-8HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	HOUSTON 34N-8HZ	<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
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
707.00	0.00	0.00	707.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Fox Hills Base</b>									
757.00	0.00	0.00	757.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>9 5/8"</b>									
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
857.00	0.00	0.00	857.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Start Build 2.00</b>									
900.00	0.86	159.49	900.00	-0.30	0.11	-0.11	2.00	2.00	0.00
1,000.00	2.86	159.49	999.94	-3.34	1.25	-1.25	2.00	2.00	0.00
1,100.00	4.86	159.49	1,099.71	-9.65	3.61	-3.61	2.00	2.00	0.00
1,200.00	6.86	159.49	1,199.18	-19.21	7.19	-7.19	2.00	2.00	0.00
1,300.00	8.86	159.49	1,298.24	-32.02	11.98	-11.98	2.00	2.00	0.00
1,400.00	10.86	159.49	1,396.75	-48.05	17.98	-17.98	2.00	2.00	0.00
1,500.00	12.86	159.49	1,494.61	-67.30	25.18	-25.18	2.00	2.00	0.00
1,600.00	14.86	159.49	1,591.70	-89.74	33.57	-33.57	2.00	2.00	0.00
1,700.00	16.86	159.49	1,687.89	-115.33	43.15	-43.15	2.00	2.00	0.00
1,710.48	17.07	159.49	1,697.91	-118.20	44.22	-44.22	2.00	2.00	0.00
<b>Start 4001.49 hold at 1710.48 MD</b>									
1,800.00	17.07	159.49	1,783.49	-142.81	53.43	-53.43	0.00	0.00	0.00
1,900.00	17.07	159.49	1,879.08	-170.30	63.71	-63.71	0.00	0.00	0.00
2,000.00	17.07	159.49	1,974.68	-197.79	74.00	-74.00	0.00	0.00	0.00
2,100.00	17.07	159.49	2,070.27	-225.29	84.28	-84.28	0.00	0.00	0.00
2,200.00	17.07	159.49	2,165.87	-252.78	94.57	-94.57	0.00	0.00	0.00
2,300.00	17.07	159.49	2,261.46	-280.27	104.85	-104.85	0.00	0.00	0.00
2,400.00	17.07	159.49	2,357.06	-307.76	115.14	-115.14	0.00	0.00	0.00
2,500.00	17.07	159.49	2,452.65	-335.25	125.42	-125.42	0.00	0.00	0.00
2,600.00	17.07	159.49	2,548.25	-362.75	135.71	-135.71	0.00	0.00	0.00
2,700.00	17.07	159.49	2,643.84	-390.24	145.99	-145.99	0.00	0.00	0.00
2,800.00	17.07	159.49	2,739.44	-417.73	156.28	-156.28	0.00	0.00	0.00
2,900.00	17.07	159.49	2,835.03	-445.22	166.56	-166.56	0.00	0.00	0.00
3,000.00	17.07	159.49	2,930.63	-472.72	176.85	-176.85	0.00	0.00	0.00
3,100.00	17.07	159.49	3,026.22	-500.21	187.13	-187.13	0.00	0.00	0.00
3,200.00	17.07	159.49	3,121.82	-527.70	197.42	-197.42	0.00	0.00	0.00
3,300.00	17.07	159.49	3,217.41	-555.19	207.70	-207.70	0.00	0.00	0.00
3,400.00	17.07	159.49	3,313.01	-582.69	217.99	-217.99	0.00	0.00	0.00
3,500.00	17.07	159.49	3,408.60	-610.18	228.28	-228.28	0.00	0.00	0.00
3,600.00	17.07	159.49	3,504.19	-637.67	238.56	-238.56	0.00	0.00	0.00
3,700.00	17.07	159.49	3,599.79	-665.16	248.85	-248.85	0.00	0.00	0.00
3,800.00	17.07	159.49	3,695.38	-692.66	259.13	-259.13	0.00	0.00	0.00
3,900.00	17.07	159.49	3,790.98	-720.15	269.42	-269.42	0.00	0.00	0.00
4,000.00	17.07	159.49	3,886.57	-747.64	279.70	-279.70	0.00	0.00	0.00
4,100.00	17.07	159.49	3,982.17	-775.13	289.99	-289.99	0.00	0.00	0.00
4,200.00	17.07	159.49	4,077.76	-802.63	300.27	-300.27	0.00	0.00	0.00
4,234.77	17.07	159.49	4,111.00	-812.19	303.85	-303.85	0.00	0.00	0.00
<b>Sussex</b>									
4,300.00	17.07	159.49	4,173.36	-830.12	310.56	-310.56	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well HOUSTON 34N-8HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4806 & KB 17 @ 4823.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4806 & KB 17 @ 4823.00ft (ASSUMED)
<b>Site:</b>	HOUSTON 9-8HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	HOUSTON 34N-8HZ	<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	17.07	159.49	4,268.95	-857.61	320.84	-320.84	0.00	0.00	0.00
4,500.00	17.07	159.49	4,364.55	-885.10	331.13	-331.13	0.00	0.00	0.00
4,600.00	17.07	159.49	4,460.14	-912.60	341.41	-341.41	0.00	0.00	0.00
4,656.34	17.07	159.49	4,514.00	-928.09	347.21	-347.21	0.00	0.00	0.00
<b>Shannon</b>									
4,700.00	17.07	159.49	4,555.74	-940.09	351.70	-351.70	0.00	0.00	0.00
4,800.00	17.07	159.49	4,651.33	-967.58	361.98	-361.98	0.00	0.00	0.00
4,900.00	17.07	159.49	4,746.93	-995.07	372.27	-372.27	0.00	0.00	0.00
5,000.00	17.07	159.49	4,842.52	-1,022.57	382.55	-382.55	0.00	0.00	0.00
5,100.00	17.07	159.49	4,938.12	-1,050.06	392.84	-392.84	0.00	0.00	0.00
5,200.00	17.07	159.49	5,033.71	-1,077.55	403.12	-403.12	0.00	0.00	0.00
5,300.00	17.07	159.49	5,129.31	-1,105.04	413.41	-413.41	0.00	0.00	0.00
5,400.00	17.07	159.49	5,224.90	-1,132.54	423.69	-423.69	0.00	0.00	0.00
5,500.00	17.07	159.49	5,320.50	-1,160.03	433.98	-433.98	0.00	0.00	0.00
5,600.00	17.07	159.49	5,416.09	-1,187.52	444.26	-444.26	0.00	0.00	0.00
5,700.00	17.07	159.49	5,511.69	-1,215.01	454.55	-454.55	0.00	0.00	0.00
5,711.97	17.07	159.49	5,523.13	-1,218.30	455.78	-455.78	0.00	0.00	0.00
<b>Start Drop -2.00</b>									
5,800.00	15.31	159.49	5,607.67	-1,241.29	464.38	-464.38	2.00	-2.00	0.00
5,900.00	13.31	159.49	5,704.56	-1,264.44	473.04	-473.04	2.00	-2.00	0.00
6,000.00	11.31	159.49	5,802.25	-1,284.40	480.51	-480.51	2.00	-2.00	0.00
6,100.00	9.31	159.49	5,900.64	-1,301.16	486.78	-486.78	2.00	-2.00	0.00
6,200.00	7.31	159.49	5,999.58	-1,314.70	491.84	-491.84	2.00	-2.00	0.00
6,300.00	5.31	159.49	6,098.97	-1,324.99	495.69	-495.69	2.00	-2.00	0.00
6,400.00	3.31	159.49	6,198.68	-1,332.03	498.33	-498.33	2.00	-2.00	0.00
6,500.00	1.31	159.49	6,298.60	-1,335.80	499.74	-499.74	2.00	-2.00	0.00
6,565.45	0.00	0.00	6,364.04	-1,336.50	500.00	-500.00	2.00	-2.00	0.00
<b>Start DLS 10.00 TFO 270.00</b>									
6,600.00	3.46	270.00	6,398.57	-1,336.50	498.96	-498.96	10.00	10.00	0.00
6,700.00	13.46	270.00	6,497.36	-1,336.50	484.27	-484.27	10.00	10.00	0.00
6,800.00	23.46	270.00	6,592.09	-1,336.50	452.66	-452.66	10.00	10.00	0.00
6,900.00	33.46	270.00	6,679.90	-1,336.50	405.07	-405.07	10.00	10.00	0.00
7,000.00	43.46	270.00	6,758.11	-1,336.50	342.96	-342.96	10.00	10.00	0.00
7,089.47	52.40	270.00	6,818.00	-1,336.50	276.61	-276.61	10.00	10.00	0.00
<b>Sharon Springs</b>									
7,100.00	53.46	270.00	6,824.35	-1,336.50	268.21	-268.21	10.00	10.00	0.00
7,145.57	58.01	270.00	6,850.00	-1,336.50	230.56	-230.56	10.00	10.00	0.00
<b>Niobrara</b>									
7,200.00	63.46	270.00	6,876.60	-1,336.50	183.10	-183.10	10.00	10.00	0.00
7,300.00	73.46	270.00	6,913.28	-1,336.50	90.20	-90.20	10.00	10.00	0.00
7,313.63	74.82	270.00	6,917.00	-1,336.50	77.10	-77.10	10.00	10.00	0.00
<b>Niobrara B</b>									
7,400.00	83.46	270.00	6,933.26	-1,336.50	-7.65	7.65	10.00	10.00	0.00
7,466.98	90.15	270.00	6,937.00	-1,336.50	-74.49	74.49	10.00	10.00	0.00
<b>Start 4490.32 hold at 7466.98 MD - 7"(381 FSL 624 FEL)</b>									
7,500.00	90.15	270.00	6,936.91	-1,336.50	-107.51	107.51	0.00	0.00	0.00
7,600.00	90.15	270.00	6,936.64	-1,336.50	-207.51	207.51	0.00	0.00	0.00
7,700.00	90.15	270.00	6,936.37	-1,336.50	-307.51	307.51	0.00	0.00	0.00
7,800.00	90.15	270.00	6,936.11	-1,336.50	-407.51	407.51	0.00	0.00	0.00
7,900.00	90.15	270.00	6,935.84	-1,336.50	-507.51	507.51	0.00	0.00	0.00
8,000.00	90.15	270.00	6,935.57	-1,336.50	-607.51	607.51	0.00	0.00	0.00
8,100.00	90.15	270.00	6,935.30	-1,336.50	-707.51	707.51	0.00	0.00	0.00
8,200.00	90.15	270.00	6,935.04	-1,336.50	-807.51	807.51	0.00	0.00	0.00

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well HOUSTON 34N-8HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4806 & KB 17 @ 4823.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4806 & KB 17 @ 4823.00ft (ASSUMED)
<b>Site:</b>	HOUSTON 9-8HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	HOUSTON 34N-8HZ	<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)	
8,300.00	90.15	270.00	6,934.77	-1,336.50	-907.51	907.51	0.00	0.00	0.00	
8,400.00	90.15	270.00	6,934.50	-1,336.50	-1,007.50	1,007.50	0.00	0.00	0.00	
8,500.00	90.15	270.00	6,934.24	-1,336.50	-1,107.50	1,107.50	0.00	0.00	0.00	
8,600.00	90.15	270.00	6,933.97	-1,336.50	-1,207.50	1,207.50	0.00	0.00	0.00	
8,700.00	90.15	270.00	6,933.70	-1,336.50	-1,307.50	1,307.50	0.00	0.00	0.00	
8,800.00	90.15	270.00	6,933.43	-1,336.50	-1,407.50	1,407.50	0.00	0.00	0.00	
8,900.00	90.15	270.00	6,933.17	-1,336.50	-1,507.50	1,507.50	0.00	0.00	0.00	
9,000.00	90.15	270.00	6,932.90	-1,336.50	-1,607.50	1,607.50	0.00	0.00	0.00	
9,100.00	90.15	270.00	6,932.63	-1,336.50	-1,707.50	1,707.50	0.00	0.00	0.00	
9,200.00	90.15	270.00	6,932.37	-1,336.50	-1,807.50	1,807.50	0.00	0.00	0.00	
9,300.00	90.15	270.00	6,932.10	-1,336.50	-1,907.50	1,907.50	0.00	0.00	0.00	
9,400.00	90.15	270.00	6,931.83	-1,336.50	-2,007.50	2,007.50	0.00	0.00	0.00	
9,500.00	90.15	270.00	6,931.56	-1,336.50	-2,107.50	2,107.50	0.00	0.00	0.00	
9,600.00	90.15	270.00	6,931.30	-1,336.50	-2,207.50	2,207.50	0.00	0.00	0.00	
9,700.00	90.15	270.00	6,931.03	-1,336.50	-2,307.50	2,307.50	0.00	0.00	0.00	
9,800.00	90.15	270.00	6,930.76	-1,336.50	-2,407.50	2,407.50	0.00	0.00	0.00	
9,900.00	90.15	270.00	6,930.50	-1,336.50	-2,507.50	2,507.50	0.00	0.00	0.00	
10,000.00	90.15	270.00	6,930.23	-1,336.50	-2,607.50	2,607.50	0.00	0.00	0.00	
10,100.00	90.15	270.00	6,929.96	-1,336.50	-2,707.50	2,707.50	0.00	0.00	0.00	
10,200.00	90.15	270.00	6,929.69	-1,336.50	-2,807.50	2,807.50	0.00	0.00	0.00	
10,300.00	90.15	270.00	6,929.43	-1,336.50	-2,907.50	2,907.50	0.00	0.00	0.00	
10,400.00	90.15	270.00	6,929.16	-1,336.50	-3,007.50	3,007.50	0.00	0.00	0.00	
10,500.00	90.15	270.00	6,928.89	-1,336.50	-3,107.50	3,107.50	0.00	0.00	0.00	
10,600.00	90.15	270.00	6,928.63	-1,336.50	-3,207.50	3,207.50	0.00	0.00	0.00	
10,700.00	90.15	270.00	6,928.36	-1,336.50	-3,307.50	3,307.50	0.00	0.00	0.00	
10,800.00	90.15	270.00	6,928.09	-1,336.50	-3,407.50	3,407.50	0.00	0.00	0.00	
10,900.00	90.15	270.00	6,927.82	-1,336.50	-3,507.50	3,507.50	0.00	0.00	0.00	
11,000.00	90.15	270.00	6,927.56	-1,336.50	-3,607.50	3,607.50	0.00	0.00	0.00	
11,100.00	90.15	270.00	6,927.29	-1,336.50	-3,707.50	3,707.50	0.00	0.00	0.00	
11,200.00	90.15	270.00	6,927.02	-1,336.50	-3,807.49	3,807.49	0.00	0.00	0.00	
11,300.00	90.15	270.00	6,926.76	-1,336.50	-3,907.49	3,907.49	0.00	0.00	0.00	
11,400.00	90.15	270.00	6,926.49	-1,336.50	-4,007.49	4,007.49	0.00	0.00	0.00	
11,500.00	90.15	270.00	6,926.22	-1,336.50	-4,107.49	4,107.49	0.00	0.00	0.00	
11,600.00	90.15	270.00	6,925.95	-1,336.50	-4,207.49	4,207.49	0.00	0.00	0.00	
11,700.00	90.15	270.00	6,925.69	-1,336.50	-4,307.49	4,307.49	0.00	0.00	0.00	
11,800.00	90.15	270.00	6,925.42	-1,336.50	-4,407.49	4,407.49	0.00	0.00	0.00	
11,900.00	90.15	270.00	6,925.15	-1,336.50	-4,507.49	4,507.49	0.00	0.00	0.00	
11,957.30	90.15	270.00	6,925.00	-1,336.50	-4,564.79	4,564.79	0.00	0.00	0.00	
TD at 11957.30 - PBHL_HOUSTON 34N-8HZ(350 FSL 50 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_HOUSTON 34N-8HZ	0.00	0.00	6,925.00	-1,336.50	-4,564.79	1,328,659.46	3,161,073.26	40.2341300	-104.9230690	
- plan hits target center										
- Point										

<b>Database:</b>	EDM 5000.1 Single User Db	<b>Local Co-ordinate Reference:</b>	Well HOUSTON 34N-8HZ
<b>Company:</b>	US ROCKIES REGION PLANNING	<b>TVD Reference:</b>	GL 4806 & KB 17 @ 4823.00ft (ASSUMED)
<b>Project:</b>	COLORADO NORTHERN ZONE - 83	<b>MD Reference:</b>	GL 4806 & KB 17 @ 4823.00ft (ASSUMED)
<b>Site:</b>	HOUSTON 9-8HZ PAD	<b>North Reference:</b>	True
<b>Well:</b>	HOUSTON 34N-8HZ	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Wellbore:</b>	OH		
<b>Design:</b>	PLAN #1 PRELIMINARY		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)	
757.00	757.00	9 5/8"	9.625	12.250	
7,466.98	6,937.00	7"(381 FSL 624 FEL)	7.000	7.500	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
707.00	707.00	Fox Hills Base				
4,234.77	4,111.00	Sussex				
4,656.34	4,514.00	Shannon				
7,089.47	6,818.00	Sharon Springs				
7,145.57	6,850.00	Niobrara				
7,313.63	6,917.00	Niobrara B				

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
857.00	857.00	0.00	0.00	Start Build 2.00	
1,710.48	1,697.91	-118.20	44.22	Start 4001.49 hold at 1710.48 MD	
5,711.97	5,523.13	-1,218.30	455.78	Start Drop -2.00	
6,565.45	6,364.04	-1,336.50	500.00	Start DLS 10.00 TFO 270.00	
7,466.98	6,937.00	-1,336.50	-74.49	Start 4490.32 hold at 7466.98 MD	
11,957.30	6,925.00	-1,336.50	-4,564.79	TD at 11957.30	