

US ROCKIES WATTENBERG PLANNING

WELD-NAD83-UTMFT13N

Green Pad

Green 5N-8HZ

Plan A

Plan: Permit Rev-1

Sperry Drilling Services Proposal Report

27 October, 2014

Well Coordinates: 14,553,214.06 N, 1,726,151.11 E (40° 04' 20.33" N, 104° 41' 36.74" W)

Ground Level: 4,970.00 usft

Local Coordinate Origin:

Centered on Well Green 5N-8HZ

Viewing Datum:

RKB = 17' @ 4987.00usft (D Rig)

TVDs to System:

N

North Reference:

True

Unit System:

Dec-Deg - API - US Survey Feet - Custom

Version: 5000.1 Build: 70

HALLIBURTON

Project: WELD-NAD83-UTMFT13N
Site: Green Pad
Well: Green 5N-8HZ
Wellbore: Plan A
Design: Permit Rev-1

US ROCKIES WATTENBERG PLANNING

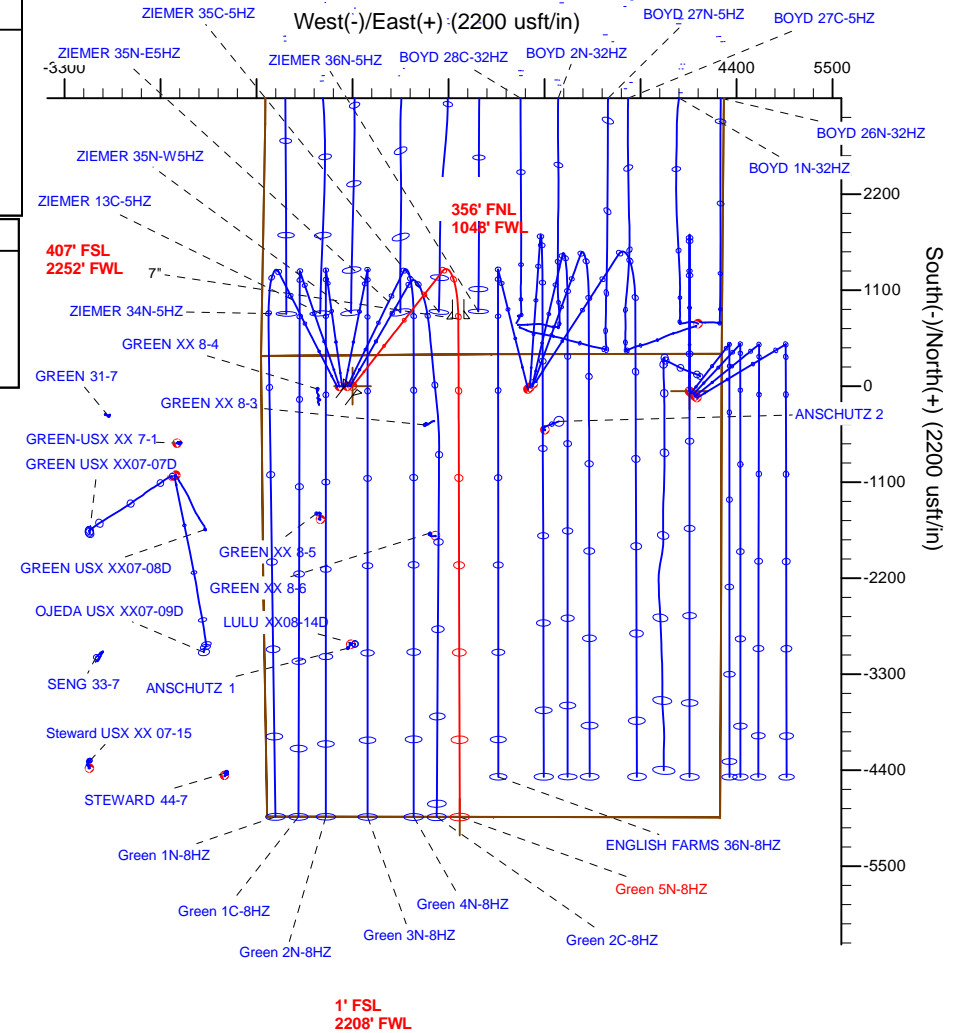
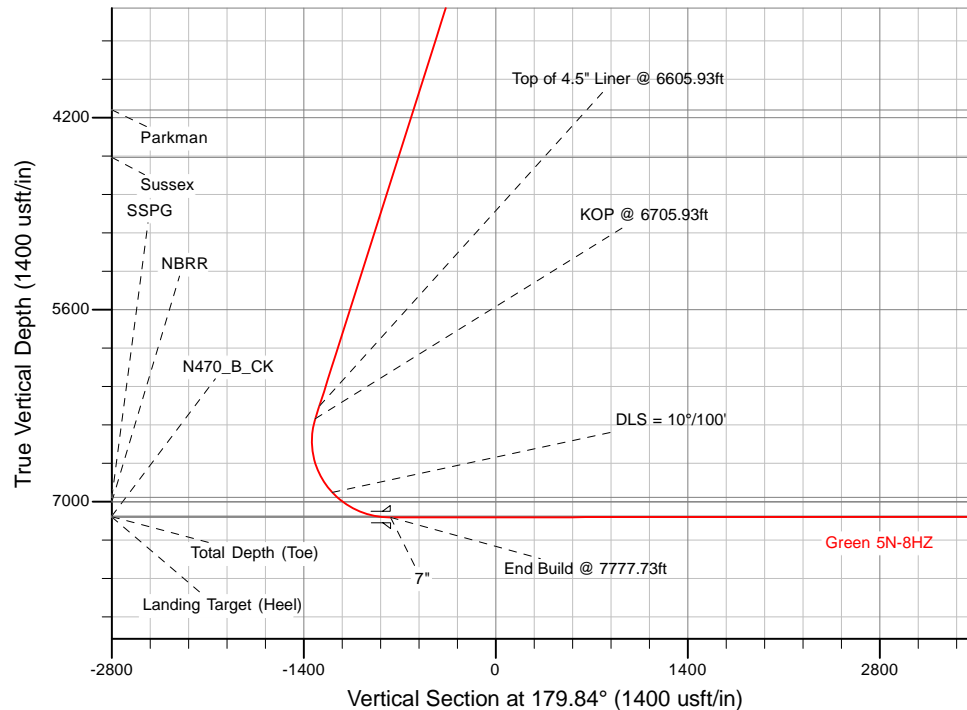
HALLIBURTON
Sperry Drilling

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1695.93	0.00	0.00	1695.93	0.00	0.00	0.00	0.00	0.00	
3	2795.93	22.00	38.00	2769.10	164.38	128.43	2.00	38.00	-164.02	
4	6705.93	22.00	38.00	6394.39	1318.59	1030.20	0.00	0.00	-1315.71	
5	7777.73	90.05	179.84	7114.00	771.06	1211.47	10.00	139.71	-767.67	
6	13485.53	90.05	179.84	7109.00	-4936.72	1226.98	0.00	0.00	4940.13	Green 5N-8HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Polygon
Green 5N-8HZ_SHL	0.00	0.00	0.00	40.072315	-104.693538	Polygon
1N-R65W-Sec. 8 Section lines	6.00	-4321.90	7938.11	40.060443	-104.665168	Polygon
1N-R65W-Sec. 5 Section Lines	38.00	-55.78	3860.39	40.072161	-104.679739	Polygon
Green 5N-8HZ_BHL	7109.00	-4936.72	1226.98	40.058758	-104.689153	Polygon



TVD MD		WELL DETAILS: Green 5N-8HZ	
6301.67 6605.93		Ground Level: 4970.00	
6394.39 6705.93		RKB = 17' @ 4987.00usft (D Rig)	
Top of 4.5" Liner @ 6605.93ft		Plan: Permit Rev-1 (Green 5N-8HZ/Plan A)	
KOP @ 6705.93ft		Created By: Clint Eshelman Date: 10/27/2014	
		Reviewed: _____ Date: _____	

Plan Report for Green 5N-8HZ - Permit Rev-1

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Green 5N-8HZ_SHL										
6.00	0.00	0.00	6.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1N-R65W-Sec. 8_Section lines										
38.00	0.00	0.00	38.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1N-R65W-Sec. 5_Section Lines										
100.00	0.00	0.00	100.00	0.00	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	0.00
300.00	0.00	0.00	300.00	0.00	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	0.00
500.00	0.00	0.00	500.00	0.00	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	0.00
700.00	0.00	0.00	700.00	0.00	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	0.00
900.00	0.00	0.00	900.00	0.00	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	0.00
1,020.00	0.00	0.00	1,020.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Base Fox Hills										
1,100.00	0.00	0.00	1,100.00	0.00	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	0.00
1,300.00	0.00	0.00	1,300.00	0.00	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	0.00
1,496.00	0.00	0.00	1,496.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Surface Csg Setting Depth - 9 5/8"										
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,695.93	0.00	0.00	1,695.93	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 1695.93ft										
1,700.00	0.08	38.00	1,700.00	0.00	0.00	0.00	2.00	2.00	0.00	38.00
1,800.00	2.08	38.00	1,799.98	1.49	1.16	-1.49	2.00	2.00	0.00	0.00
1,900.00	4.08	38.00	1,899.83	5.73	4.47	-5.71	2.00	2.00	0.00	0.00
2,000.00	6.08	38.00	1,999.43	12.70	9.93	-12.68	2.00	2.00	0.00	0.00
2,100.00	8.08	38.00	2,098.66	22.42	17.52	-22.37	2.00	2.00	0.00	0.00
2,200.00	10.08	38.00	2,197.40	34.86	27.23	-34.78	2.00	2.00	0.00	0.00
2,300.00	12.08	38.00	2,295.53	50.00	39.06	-49.89	2.00	2.00	0.00	0.00
2,400.00	14.08	38.00	2,392.93	67.84	53.00	-67.69	2.00	2.00	0.00	0.00
2,500.00	16.08	38.00	2,489.48	88.34	69.02	-88.14	2.00	2.00	0.00	0.00
2,600.00	18.08	38.00	2,585.07	111.48	87.10	-111.24	2.00	2.00	0.00	0.00
2,700.00	20.08	38.00	2,679.57	137.24	107.23	-136.94	2.00	2.00	0.00	0.00
2,795.93	22.00	38.00	2,769.10	164.38	128.43	-164.02	2.00	2.00	0.00	0.00
End Nudge @ 2795.93ft										
2,800.00	22.00	38.00	2,772.87	165.58	129.37	-165.22	0.00	0.00	0.00	0.00
2,900.00	22.00	38.00	2,865.59	195.10	152.43	-194.68	0.00	0.00	0.00	0.00
3,000.00	22.00	38.00	2,958.31	224.62	175.49	-224.13	0.00	0.00	0.00	0.00
3,100.00	22.00	38.00	3,051.03	254.14	198.56	-253.59	0.00	0.00	0.00	0.00
3,200.00	22.00	38.00	3,143.75	283.66	221.62	-283.04	0.00	0.00	0.00	0.00
3,300.00	22.00	38.00	3,236.46	313.18	244.68	-312.50	0.00	0.00	0.00	0.00
3,400.00	22.00	38.00	3,329.18	342.70	267.75	-341.95	0.00	0.00	0.00	0.00
3,500.00	22.00	38.00	3,421.90	372.22	290.81	-371.41	0.00	0.00	0.00	0.00
3,600.00	22.00	38.00	3,514.62	401.74	313.87	-400.86	0.00	0.00	0.00	0.00
3,700.00	22.00	38.00	3,607.34	431.26	336.94	-430.31	0.00	0.00	0.00	0.00
3,800.00	22.00	38.00	3,700.06	460.78	360.00	-459.77	0.00	0.00	0.00	0.00
3,900.00	22.00	38.00	3,792.77	490.30	383.06	-489.22	0.00	0.00	0.00	0.00
4,000.00	22.00	38.00	3,885.49	519.82	406.12	-518.68	0.00	0.00	0.00	0.00
4,100.00	22.00	38.00	3,978.21	549.33	429.19	-548.13	0.00	0.00	0.00	0.00
4,200.00	22.00	38.00	4,070.93	578.85	452.25	-577.59	0.00	0.00	0.00	0.00
4,278.81	22.00	38.00	4,144.00	602.12	470.43	-600.80	0.00	0.00	0.00	0.00
Parkman										

Plan Report for Green 5N-8HZ - Permit Rev-1

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
4,300.00	22.00	38.00	4,163.65	608.37	475.31	-607.04	0.00	0.00	0.00	0.00
4,400.00	22.00	38.00	4,256.37	637.89	498.38	-636.50	0.00	0.00	0.00	0.00
4,500.00	22.00	38.00	4,349.09	667.41	521.44	-665.95	0.00	0.00	0.00	0.00
4,600.00	22.00	38.00	4,441.80	696.93	544.50	-695.41	0.00	0.00	0.00	0.00
4,650.90	22.00	38.00	4,489.00	711.96	556.24	-710.40	0.00	0.00	0.00	0.00
Sussex										
4,700.00	22.00	38.00	4,534.52	726.45	567.57	-724.86	0.00	0.00	0.00	0.00
4,800.00	22.00	38.00	4,627.24	755.97	590.63	-754.32	0.00	0.00	0.00	0.00
4,900.00	22.00	38.00	4,719.96	785.49	613.69	-783.77	0.00	0.00	0.00	0.00
5,000.00	22.00	38.00	4,812.68	815.01	636.76	-813.23	0.00	0.00	0.00	0.00
5,100.00	22.00	38.00	4,905.40	844.53	659.82	-842.68	0.00	0.00	0.00	0.00
5,200.00	22.00	38.00	4,998.11	874.05	682.88	-872.14	0.00	0.00	0.00	0.00
5,300.00	22.00	38.00	5,090.83	903.57	705.94	-901.59	0.00	0.00	0.00	0.00
5,400.00	22.00	38.00	5,183.55	933.09	729.01	-931.05	0.00	0.00	0.00	0.00
5,500.00	22.00	38.00	5,276.27	962.61	752.07	-960.50	0.00	0.00	0.00	0.00
5,600.00	22.00	38.00	5,368.99	992.13	775.13	-989.96	0.00	0.00	0.00	0.00
5,700.00	22.00	38.00	5,461.71	1,021.65	798.20	-1,019.41	0.00	0.00	0.00	0.00
5,800.00	22.00	38.00	5,554.42	1,051.16	821.26	-1,048.87	0.00	0.00	0.00	0.00
5,900.00	22.00	38.00	5,647.14	1,080.68	844.32	-1,078.32	0.00	0.00	0.00	0.00
6,000.00	22.00	38.00	5,739.86	1,110.20	867.39	-1,107.78	0.00	0.00	0.00	0.00
6,100.00	22.00	38.00	5,832.58	1,139.72	890.45	-1,137.23	0.00	0.00	0.00	0.00
6,200.00	22.00	38.00	5,925.30	1,169.24	913.51	-1,166.69	0.00	0.00	0.00	0.00
6,300.00	22.00	38.00	6,018.02	1,198.76	936.58	-1,196.14	0.00	0.00	0.00	0.00
6,400.00	22.00	38.00	6,110.73	1,228.28	959.64	-1,225.60	0.00	0.00	0.00	0.00
6,500.00	22.00	38.00	6,203.45	1,257.80	982.70	-1,255.05	0.00	0.00	0.00	0.00
6,600.00	22.00	38.00	6,296.17	1,287.32	1,005.76	-1,284.51	0.00	0.00	0.00	0.00
6,605.93	22.00	38.00	6,301.67	1,289.07	1,007.13	-1,286.25	0.00	0.00	0.00	0.00
Top of 4.5" Liner @ 6605.93ft										
6,700.00	22.00	38.00	6,388.89	1,316.84	1,028.83	-1,313.96	0.00	0.00	0.00	0.00
6,705.93	22.00	38.00	6,394.39	1,318.59	1,030.20	-1,315.71	0.00	0.00	0.00	0.00
KOP @ 6705.93ft										
6,800.00	15.97	60.60	6,483.42	1,338.87	1,052.36	-1,335.93	10.00	-6.41	24.02	139.71
6,900.00	14.20	99.16	6,580.21	1,343.69	1,076.52	-1,340.67	10.00	-1.77	38.56	118.29
7,000.00	18.55	131.77	6,676.33	1,331.10	1,100.55	-1,328.02	10.00	4.36	32.61	80.95
7,100.00	26.13	149.24	6,768.85	1,301.51	1,123.74	-1,298.36	10.00	7.58	17.47	49.58
7,200.00	34.89	158.85	6,854.97	1,255.80	1,145.38	-1,252.59	10.00	8.76	9.61	33.37
7,300.00	44.12	164.91	6,932.08	1,195.36	1,164.81	-1,192.10	10.00	9.24	6.06	25.06
DLS = 10°/100'										
7,352.28	49.05	167.32	6,968.00	1,158.50	1,173.88	-1,155.22	10.00	9.43	4.60	20.36
SSPG										
7,400.00	53.59	169.22	6,997.81	1,122.04	1,181.43	-1,118.73	10.00	9.51	3.98	18.71
7,405.40	54.10	169.42	7,001.00	1,117.75	1,182.24	-1,114.45	10.00	9.54	3.72	17.52
NBRR										
7,500.00	63.17	172.58	7,050.19	1,038.05	1,194.76	-1,034.71	10.00	9.59	3.34	17.40
7,600.00	72.82	175.41	7,087.62	945.96	1,204.37	-942.59	10.00	9.65	2.83	15.75
7,673.97	79.99	177.31	7,105.00	874.25	1,208.92	-870.87	10.00	9.68	2.57	14.69
N470_B_CK										
7,700.00	82.51	177.95	7,108.96	848.55	1,209.99	-845.17	10.00	9.69	2.48	14.24
7,777.73	90.05	179.84	7,114.00	771.06	1,211.47	-767.67	10.00	9.70	2.44	14.14
End Build @ 7777.73ft - Landing Target (Heel) - 7"										
7,800.00	90.05	179.84	7,113.98	748.79	1,211.53	-745.40	0.00	0.00	0.00	14.02
7,900.00	90.05	179.84	7,113.89	648.79	1,211.81	-645.40	0.00	0.00	0.00	0.00
8,000.00	90.05	179.84	7,113.81	548.79	1,212.08	-545.40	0.00	0.00	0.00	0.00
8,100.00	90.05	179.84	7,113.72	448.79	1,212.35	-445.40	0.00	0.00	0.00	0.00
8,200.00	90.05	179.84	7,113.63	348.79	1,212.62	-345.40	0.00	0.00	0.00	0.00
8,300.00	90.05	179.84	7,113.54	248.79	1,212.89	-245.40	0.00	0.00	0.00	0.00
8,400.00	90.05	179.84	7,113.45	148.79	1,213.16	-145.40	0.00	0.00	0.00	0.00
8,500.00	90.05	179.84	7,113.37	48.79	1,213.44	-45.40	0.00	0.00	0.00	0.00

Plan Report for Green 5N-8HZ - Permit Rev-1

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
8,600.00	90.05	179.84	7,113.28	-51.21	1,213.71	54.60	0.00	0.00	0.00	0.00
8,700.00	90.05	179.84	7,113.19	-151.21	1,213.98	154.60	0.00	0.00	0.00	0.00
8,800.00	90.05	179.84	7,113.10	-251.21	1,214.25	254.60	0.00	0.00	0.00	0.00
8,900.00	90.05	179.84	7,113.02	-351.21	1,214.52	354.60	0.00	0.00	0.00	0.00
9,000.00	90.05	179.84	7,112.93	-451.21	1,214.79	454.60	0.00	0.00	0.00	0.00
9,100.00	90.05	179.84	7,112.84	-551.21	1,215.07	554.60	0.00	0.00	0.00	0.00
9,200.00	90.05	179.84	7,112.75	-651.20	1,215.34	654.60	0.00	0.00	0.00	0.00
9,300.00	90.05	179.84	7,112.67	-751.20	1,215.61	754.60	0.00	0.00	0.00	0.00
9,400.00	90.05	179.84	7,112.58	-851.20	1,215.88	854.60	0.00	0.00	0.00	0.00
9,500.00	90.05	179.84	7,112.49	-951.20	1,216.15	954.60	0.00	0.00	0.00	0.00
9,600.00	90.05	179.84	7,112.40	-1,051.20	1,216.42	1,054.60	0.00	0.00	0.00	0.00
9,700.00	90.05	179.84	7,112.32	-1,151.20	1,216.69	1,154.60	0.00	0.00	0.00	0.00
9,800.00	90.05	179.84	7,112.23	-1,251.20	1,216.97	1,254.60	0.00	0.00	0.00	0.00
9,900.00	90.05	179.84	7,112.14	-1,351.20	1,217.24	1,354.60	0.00	0.00	0.00	0.00
10,000.00	90.05	179.84	7,112.05	-1,451.20	1,217.51	1,454.60	0.00	0.00	0.00	0.00
10,100.00	90.05	179.84	7,111.97	-1,551.20	1,217.78	1,554.60	0.00	0.00	0.00	0.00
10,200.00	90.05	179.84	7,111.88	-1,651.20	1,218.05	1,654.60	0.00	0.00	0.00	0.00
10,300.00	90.05	179.84	7,111.79	-1,751.20	1,218.32	1,754.60	0.00	0.00	0.00	0.00
10,400.00	90.05	179.84	7,111.70	-1,851.20	1,218.60	1,854.60	0.00	0.00	0.00	0.00
10,500.00	90.05	179.84	7,111.62	-1,951.20	1,218.87	1,954.60	0.00	0.00	0.00	0.00
10,600.00	90.05	179.84	7,111.53	-2,051.20	1,219.14	2,054.60	0.00	0.00	0.00	0.00
10,700.00	90.05	179.84	7,111.44	-2,151.20	1,219.41	2,154.60	0.00	0.00	0.00	0.00
10,800.00	90.05	179.84	7,111.35	-2,251.20	1,219.68	2,254.60	0.00	0.00	0.00	0.00
10,900.00	90.05	179.84	7,111.26	-2,351.20	1,219.95	2,354.60	0.00	0.00	0.00	0.00
11,000.00	90.05	179.84	7,111.18	-2,451.20	1,220.23	2,454.60	0.00	0.00	0.00	0.00
11,100.00	90.05	179.84	7,111.09	-2,551.20	1,220.50	2,554.60	0.00	0.00	0.00	0.00
11,200.00	90.05	179.84	7,111.00	-2,651.20	1,220.77	2,654.60	0.00	0.00	0.00	0.00
11,300.00	90.05	179.84	7,110.91	-2,751.20	1,221.04	2,754.60	0.00	0.00	0.00	0.00
11,400.00	90.05	179.84	7,110.83	-2,851.20	1,221.31	2,854.60	0.00	0.00	0.00	0.00
11,500.00	90.05	179.84	7,110.74	-2,951.20	1,221.58	2,954.60	0.00	0.00	0.00	0.00
11,600.00	90.05	179.84	7,110.65	-3,051.19	1,221.86	3,054.59	0.00	0.00	0.00	0.00
11,700.00	90.05	179.84	7,110.56	-3,151.19	1,222.13	3,154.59	0.00	0.00	0.00	0.00
11,800.00	90.05	179.84	7,110.48	-3,251.19	1,222.40	3,254.59	0.00	0.00	0.00	0.00
11,900.00	90.05	179.84	7,110.39	-3,351.19	1,222.67	3,354.59	0.00	0.00	0.00	0.00
12,000.00	90.05	179.84	7,110.30	-3,451.19	1,222.94	3,454.59	0.00	0.00	0.00	0.00
12,100.00	90.05	179.84	7,110.21	-3,551.19	1,223.21	3,554.59	0.00	0.00	0.00	0.00
12,200.00	90.05	179.84	7,110.13	-3,651.19	1,223.49	3,654.59	0.00	0.00	0.00	0.00
12,300.00	90.05	179.84	7,110.04	-3,751.19	1,223.76	3,754.59	0.00	0.00	0.00	0.00
12,400.00	90.05	179.84	7,109.95	-3,851.19	1,224.03	3,854.59	0.00	0.00	0.00	0.00
12,500.00	90.05	179.84	7,109.86	-3,951.19	1,224.30	3,954.59	0.00	0.00	0.00	0.00
12,600.00	90.05	179.84	7,109.78	-4,051.19	1,224.57	4,054.59	0.00	0.00	0.00	0.00
12,700.00	90.05	179.84	7,109.69	-4,151.19	1,224.84	4,154.59	0.00	0.00	0.00	0.00
12,800.00	90.05	179.84	7,109.60	-4,251.19	1,225.12	4,254.59	0.00	0.00	0.00	0.00
12,900.00	90.05	179.84	7,109.51	-4,351.19	1,225.39	4,354.59	0.00	0.00	0.00	0.00
13,000.00	90.05	179.84	7,109.43	-4,451.19	1,225.66	4,454.59	0.00	0.00	0.00	0.00
13,100.00	90.05	179.84	7,109.34	-4,551.19	1,225.93	4,554.59	0.00	0.00	0.00	0.00
13,200.00	90.05	179.84	7,109.25	-4,651.19	1,226.20	4,654.59	0.00	0.00	0.00	0.00
13,300.00	90.05	179.84	7,109.16	-4,751.19	1,226.47	4,754.59	0.00	0.00	0.00	0.00
13,400.00	90.05	179.84	7,109.07	-4,851.19	1,226.74	4,854.59	0.00	0.00	0.00	0.00
13,485.53	90.05	179.84	7,109.00	-4,936.72	1,226.98	4,940.12	0.00	0.00	0.00	0.00

TD Well @ 13485.53ft - Total Depth (Toe) - Green 5N-8HZ_BHL

Plan Report for Green 5N-8HZ - Permit Rev-1

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
1,695.93	1,695.93	0.00	0.00	Begin Nudge @ 1695.93ft
2,795.93	2,769.10	164.38	128.43	End Nudge @ 2795.93ft
6,605.93	6,301.67	1,289.07	1,007.13	Top of 4.5" Liner @ 6605.93ft
6,705.93	6,394.39	1,318.59	1,030.20	KOP @ 6705.93ft
7,300.00	6,932.08	1,195.36	1,164.81	DLS = 10°/100'
7,777.73	7,114.00	771.06	1,211.47	End Build @ 7777.73ft
13,485.53	7,109.00	-4,936.72	1,226.98	TD Well @ 13485.53ft

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (usft)
				+N/-S (usft)	+E/-W (usft)	
User	No Target (Freehand)	179.84	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.00	7,777.73	Permit Rev-1	MWD+IFR1
7,777.73	13,485.53	Permit Rev-1	MWD+IFR1

Casing Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,496.00	1,496.00	9 5/8"	9-5/8	13-1/2
7,777.73	7,114.00	7"	7	8-3/4

Formation Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,020.00	1,020.00	Base Fox Hills		0.00	
1,496.00	1,496.00	Surface Csg Setting Depth		0.00	
4,278.81	4,144.00	Parkman		0.00	
4,650.90	4,489.00	Sussex		0.00	
7,352.28	6,968.00	SSPG		0.00	
7,405.40	7,001.00	NBRR		0.00	
7,673.97	7,105.00	N470_B_CK		0.00	
7,777.73	7,114.00	Landing Target (Heel)		0.00	
13,485.53	7,109.00	Total Depth (Toe)		0.00	

Targets associated with this wellbore

Target Name	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Shape
1N-R65W-Sec. 5_Section Lines	38.00	-55.78	3,860.39	Polygon
1N-R65W-Sec. 8_Section lines	6.00	-4,321.90	7,938.11	Polygon
Green 5N-8HZ_BHL	7,109.00	-4,936.72	1,226.98	Point
Green 5N-8HZ_SHL	0.00	0.00	0.00	Point

North Reference Sheet for Green Pad - Green 5N-8HZ - Plan A

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to True North Reference.

Vertical Depths are relative to RKB = 17' @ 4987.00usft (D Rig). Northing and Easting are relative to Green 5N-8HZ

Coordinate System is Universal Transverse Mercator (US Survey Feet), Zone 13N (108 W to 102 W) using datum North American Datum 1983, ellipsoid

Projection method is Transverse Mercator (Gauss-Kruger)

Central Meridian is -105.00°, Longitude Origin:0.000000°, Latitude Origin:0.000000°

False Easting: 1,640,416.67usft, False Northing: 0.00usft, Scale Reduction: 0.99960841

Grid Coordinates of Well: 14,553,214.06 usft N, 1,726,151.11 usft E

Geographical Coordinates of Well: 40° 04' 20.33" N, 104° 41' 36.74" W

Grid Convergence at Surface is: 0.20°

Based upon Minimum Curvature type calculations, at a Measured Depth of 13,485.53usft the Bottom Hole Displacement is 5,086.91usft in the Direction of 166.04° (True).

Magnetic Convergence at surface is: -8.15° (23 October 2014, , IGRF2010)

