

US ROCKIES WATTENBERG PLANNING

WELD-NAD83-UTMFT13N

Green Pad

Green 1N-8HZ

Plan A

Plan: Permit Rev-1

Sperry Drilling Services Proposal Report

27 October, 2014

Well Coordinates: 14,553,210.16 N, 1,725,971.51 E (40° 04' 20.30" N, 104° 41' 39.05" W)

Ground Level: 4,972.00 usft

Local Coordinate Origin:

Centered on Well Green 1N-8HZ

Viewing Datum:

RKB = 17' @ 4989.00usft (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 1N-8HZ

Wellbore: Plan A

Design: Permit Rev-1

US ROCKIES WATTENBERG PLANNING

HALLIBURTON

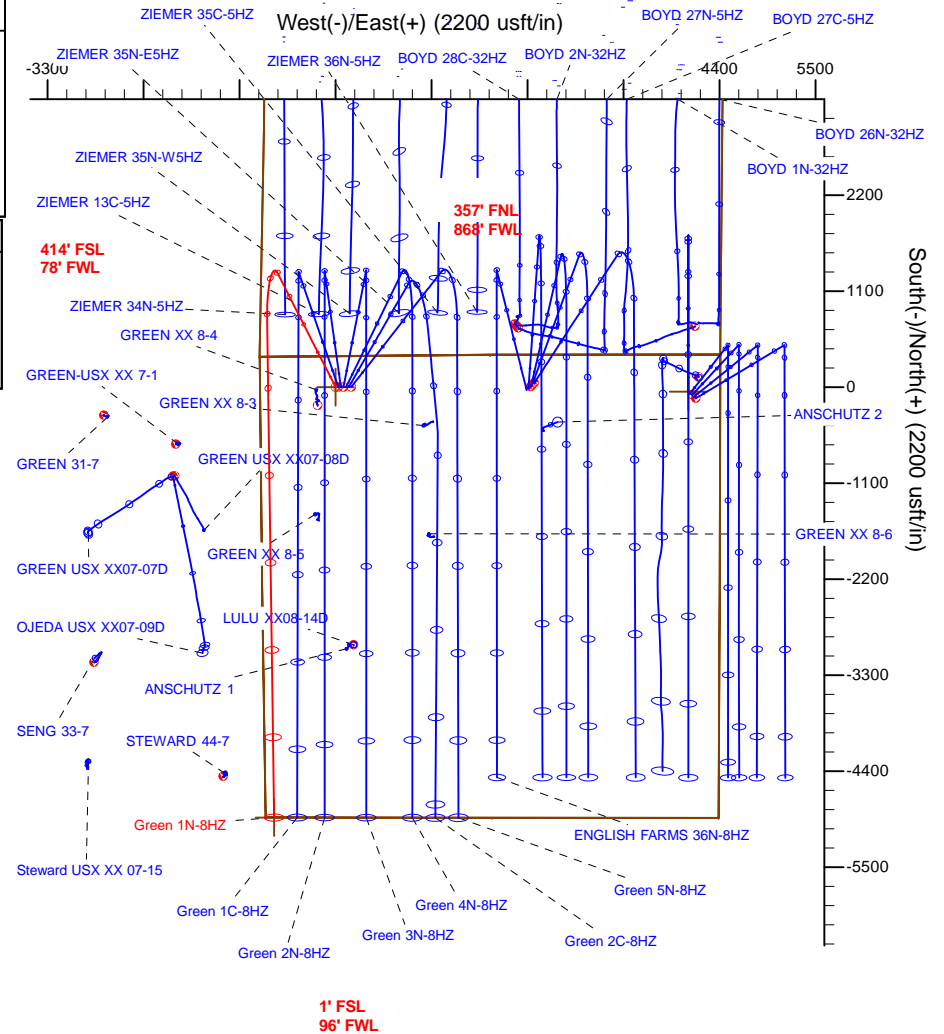
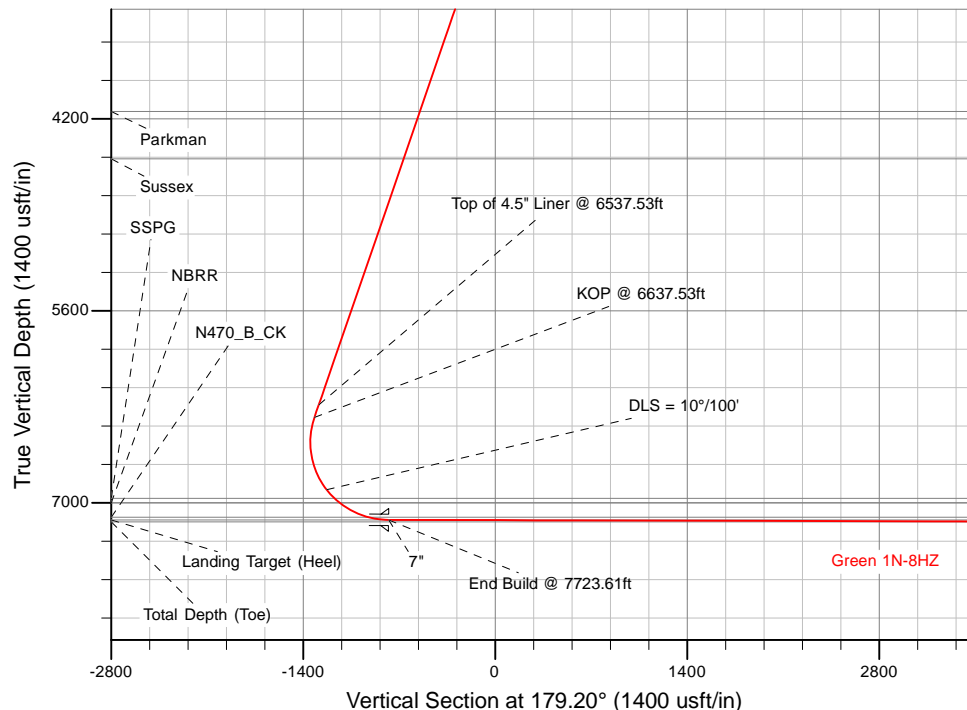
Sperry Drilling

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	2022.53	0.00	0.00	2022.53	0.00	0.00	0.00	0.00	0.00	
3	3072.53	21.00	333.00	3049.18	169.54	-86.38	2.00	333.00	-170.73	
4	6637.53	21.00	333.00	6377.39	1307.87	-666.39	0.00	0.00	-1317.05	
5	7723.61	89.85	179.20	7124.00	765.12	-784.96	10.00	-152.24	-776.00	
6	13420.22	89.85	179.20	7139.00	-4930.91	-705.13	0.00	0.00	4920.59	Green 1N-8HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Polygon
Green 1N-8HZ_SHL	0.00	0.00	0.00	40.072306	-104.694180	Polygon
1N-R65W-Sec. 8 Section lines	8.00	-4318.57	8117.74	40.060443	-104.665168	Polygon
1N-R65W-Sec. 5 Section Lines	40.00	-52.47	4039.99	40.072161	-104.679739	Polygon
Green 1N-8HZ_BHL	7139.00	-4930.91	-705.13	40.058765	-104.696700	Polygon



TVD MD

6284.03 6537.53 Top of 4.5" Liner @ 6537.53ft
6377.39 6637.53 KOP @ 6637.53ft

WELL DETAILS: Green 1N-8HZ

Ground Level: 4972.00

RKB = 17' @ 4989.00usft (D Rig)

Plan: Permit Rev-1 (Green 1N-8HZ/Plan A)

Created By: Clint Eshelman

Date: 10/27/2014

Reviewed:

Date:

Plan Report for Green 1N-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 1N-8HZ_SHL										
8.00	0.00	0.00	8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1N-R65W-Sec. 8_Section lines										
40.00	0.00	0.00	40.00	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
1,022.00	0.00	0.00	1,022.00	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
1,498.00	0.00	0.00	1,498.00	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
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2,022.53	0.00	0.00	2,022.53	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Begin Nudge @ 2022.53ft										
2,100.00	1.55	333.00	2,099.99	0.93	-0.48	-0.94	2.00	2.00	0.00	333.00
2,200.00	3.55	333.00	2,199.89	4.90	-2.49	-4.93	2.00	2.00	0.00	0.00
2,300.00	5.55	333.00	2,299.57	11.96	-6.10	-12.05	2.00	2.00	0.00	0.00
2,400.00	7.55	333.00	2,398.91	22.13	-11.27	-22.28	2.00	2.00	0.00	0.00
2,500.00	9.55	333.00	2,497.79	35.37	-18.02	-35.62	2.00	2.00	0.00	0.00
2,600.00	11.55	333.00	2,596.10	51.68	-26.33	-52.05	2.00	2.00	0.00	0.00
2,700.00	13.55	333.00	2,693.70	71.04	-36.20	-71.54	2.00	2.00	0.00	0.00
2,800.00	15.55	333.00	2,790.49	93.42	-47.60	-94.08	2.00	2.00	0.00	0.00
2,900.00	17.55	333.00	2,886.34	118.80	-60.53	-119.64	2.00	2.00	0.00	0.00
3,000.00	19.55	333.00	2,981.14	147.15	-74.97	-148.18	2.00	2.00	0.00	0.00
3,072.53	21.00	333.00	3,049.18	169.54	-86.38	-170.73	2.00	2.00	0.00	0.00
End Nudge @ 3072.53ft										
3,100.00	21.00	333.00	3,074.82	178.31	-90.85	-179.56	0.00	0.00	0.00	0.00
3,200.00	21.00	333.00	3,168.18	210.24	-107.12	-211.72	0.00	0.00	0.00	0.00
3,300.00	21.00	333.00	3,261.54	242.17	-123.39	-243.87	0.00	0.00	0.00	0.00
3,400.00	21.00	333.00	3,354.90	274.10	-139.66	-276.03	0.00	0.00	0.00	0.00
3,500.00	21.00	333.00	3,448.26	306.03	-155.93	-308.18	0.00	0.00	0.00	0.00
3,600.00	21.00	333.00	3,541.61	337.96	-172.20	-340.34	0.00	0.00	0.00	0.00
3,700.00	21.00	333.00	3,634.97	369.90	-188.47	-372.49	0.00	0.00	0.00	0.00
3,800.00	21.00	333.00	3,728.33	401.83	-204.74	-404.65	0.00	0.00	0.00	0.00
3,900.00	21.00	333.00	3,821.69	433.76	-221.01	-436.80	0.00	0.00	0.00	0.00
4,000.00	21.00	333.00	3,915.05	465.69	-237.28	-468.96	0.00	0.00	0.00	0.00
4,100.00	21.00	333.00	4,008.40	497.62	-253.55	-501.11	0.00	0.00	0.00	0.00
4,200.00	21.00	333.00	4,101.76	529.55	-269.82	-533.27	0.00	0.00	0.00	0.00
4,247.38	21.00	333.00	4,146.00	544.68	-277.53	-548.50	0.00	0.00	0.00	0.00
Parkman										

Plan Report for Green 1N-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	21.00	333.00	4,195.12	561.48	-286.09	-565.42	0.00	0.00	0.00	0.00
4,400.00	21.00	333.00	4,288.48	593.41	-302.36	-597.57	0.00	0.00	0.00	0.00
4,500.00	21.00	333.00	4,381.84	625.34	-318.63	-629.73	0.00	0.00	0.00	0.00
4,600.00	21.00	333.00	4,475.19	657.27	-334.90	-661.88	0.00	0.00	0.00	0.00
4,616.93	21.00	333.00	4,491.00	662.68	-337.65	-667.33	0.00	0.00	0.00	0.00
Sussex										
4,700.00	21.00	333.00	4,568.55	689.20	-351.17	-694.04	0.00	0.00	0.00	0.00
4,800.00	21.00	333.00	4,661.91	721.13	-367.44	-726.19	0.00	0.00	0.00	0.00
4,900.00	21.00	333.00	4,755.27	753.07	-383.71	-758.35	0.00	0.00	0.00	0.00
5,000.00	21.00	333.00	4,848.63	785.00	-399.98	-790.50	0.00	0.00	0.00	0.00
5,100.00	21.00	333.00	4,941.98	816.93	-416.24	-822.66	0.00	0.00	0.00	0.00
5,200.00	21.00	333.00	5,035.34	848.86	-432.51	-854.81	0.00	0.00	0.00	0.00
5,300.00	21.00	333.00	5,128.70	880.79	-448.78	-886.97	0.00	0.00	0.00	0.00
5,400.00	21.00	333.00	5,222.06	912.72	-465.05	-919.12	0.00	0.00	0.00	0.00
5,500.00	21.00	333.00	5,315.42	944.65	-481.32	-951.28	0.00	0.00	0.00	0.00
5,600.00	21.00	333.00	5,408.78	976.58	-497.59	-983.43	0.00	0.00	0.00	0.00
5,700.00	21.00	333.00	5,502.13	1,008.51	-513.86	-1,015.59	0.00	0.00	0.00	0.00
5,800.00	21.00	333.00	5,595.49	1,040.44	-530.13	-1,047.74	0.00	0.00	0.00	0.00
5,900.00	21.00	333.00	5,688.85	1,072.37	-546.40	-1,079.90	0.00	0.00	0.00	0.00
6,000.00	21.00	333.00	5,782.21	1,104.30	-562.67	-1,112.05	0.00	0.00	0.00	0.00
6,100.00	21.00	333.00	5,875.57	1,136.23	-578.94	-1,144.21	0.00	0.00	0.00	0.00
6,200.00	21.00	333.00	5,968.92	1,168.17	-595.21	-1,176.36	0.00	0.00	0.00	0.00
6,300.00	21.00	333.00	6,062.28	1,200.10	-611.48	-1,208.52	0.00	0.00	0.00	0.00
6,400.00	21.00	333.00	6,155.64	1,232.03	-627.75	-1,240.67	0.00	0.00	0.00	0.00
6,500.00	21.00	333.00	6,249.00	1,263.96	-644.02	-1,272.83	0.00	0.00	0.00	0.00
6,537.53	21.00	333.00	6,284.03	1,275.94	-650.12	-1,284.89	0.00	0.00	0.00	0.00
Top of 4.5" Liner @ 6537.53ft										
6,600.00	21.00	333.00	6,342.36	1,295.89	-660.29	-1,304.98	0.00	0.00	0.00	0.00
6,637.53	21.00	333.00	6,377.39	1,307.87	-666.39	-1,317.05	0.00	0.00	0.00	0.00
KOP @ 6637.53ft										
6,700.00	15.73	322.23	6,436.68	1,324.56	-676.67	-1,333.88	10.00	-8.43	-17.25	-152.24
6,800.00	9.93	283.91	6,534.30	1,337.38	-693.39	-1,346.93	10.00	-5.80	-38.32	-142.00
6,900.00	12.16	230.96	6,632.68	1,332.81	-709.98	-1,342.59	10.00	2.23	-52.95	-104.53
7,000.00	19.88	207.09	6,728.83	1,310.98	-725.95	-1,320.99	10.00	7.72	-23.87	-52.42
7,100.00	28.99	196.96	6,819.81	1,272.56	-740.80	-1,282.78	10.00	9.11	-10.13	-29.40
7,200.00	38.52	191.45	6,902.87	1,218.73	-754.08	-1,229.14	10.00	9.53	-5.51	-20.15
DLS = 10°/100'										
7,285.94	46.85	188.30	6,966.00	1,161.37	-763.94	-1,171.92	10.00	9.69	-3.66	-15.55
SSPG										
7,300.00	48.22	187.87	6,975.49	1,151.10	-765.40	-1,161.68	10.00	9.74	-3.07	-13.23
7,338.20	51.95	186.79	7,000.00	1,122.05	-769.13	-1,132.68	10.00	9.76	-2.84	-12.94
NBRR										
7,400.00	58.00	185.25	7,035.46	1,071.74	-774.41	-1,082.45	10.00	9.79	-2.50	-12.24
7,500.00	67.82	183.13	7,080.95	983.06	-780.83	-993.87	10.00	9.82	-2.12	-11.35
7,576.11	75.31	181.72	7,105.00	910.98	-783.86	-921.84	10.00	9.84	-1.86	-10.39
N470_B_CK										
7,600.00	77.66	181.29	7,110.58	887.76	-784.47	-898.62	10.00	9.85	-1.77	-9.94
7,700.00	87.52	179.59	7,123.46	788.72	-785.21	-799.61	10.00	9.86	-1.70	-9.84
7,723.61	89.85	179.20	7,124.00	765.12	-784.96	-776.01	10.00	9.86	-1.67	-9.62
End Build @ 7723.61ft - Landing Target (Heel) - 7"										
7,800.00	89.85	179.20	7,124.20	688.74	-783.89	-699.62	0.00	0.00	0.00	-9.61
7,900.00	89.85	179.20	7,124.47	588.75	-782.49	-599.62	0.00	0.00	0.00	0.00
8,000.00	89.85	179.20	7,124.73	488.76	-781.09	-499.62	0.00	0.00	0.00	0.00
8,100.00	89.85	179.20	7,124.99	388.77	-779.69	-399.62	0.00	0.00	0.00	0.00
8,200.00	89.85	179.20	7,125.26	288.78	-778.29	-299.62	0.00	0.00	0.00	0.00
8,300.00	89.85	179.20	7,125.52	188.79	-776.89	-199.62	0.00	0.00	0.00	0.00
8,400.00	89.85	179.20	7,125.78	88.80	-775.49	-99.62	0.00	0.00	0.00	0.00
8,500.00	89.85	179.20	7,126.05	-11.19	-774.08	0.38	0.00	0.00	0.00	0.00

Plan Report for Green 1N-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	89.85	179.20	7,126.31	-111.18	-772.68	100.38	0.00	0.00	0.00	0.00
8,700.00	89.85	179.20	7,126.57	-211.17	-771.28	200.38	0.00	0.00	0.00	0.00
8,800.00	89.85	179.20	7,126.84	-311.16	-769.88	300.38	0.00	0.00	0.00	0.00
8,900.00	89.85	179.20	7,127.10	-411.15	-768.48	400.38	0.00	0.00	0.00	0.00
9,000.00	89.85	179.20	7,127.36	-511.14	-767.08	500.38	0.00	0.00	0.00	0.00
9,100.00	89.85	179.20	7,127.63	-611.13	-765.68	600.38	0.00	0.00	0.00	0.00
9,200.00	89.85	179.20	7,127.89	-711.12	-764.27	700.38	0.00	0.00	0.00	0.00
9,300.00	89.85	179.20	7,128.15	-811.11	-762.87	800.38	0.00	0.00	0.00	0.00
9,400.00	89.85	179.20	7,128.42	-911.10	-761.47	900.38	0.00	0.00	0.00	0.00
9,500.00	89.85	179.20	7,128.68	-1,011.09	-760.07	1,000.38	0.00	0.00	0.00	0.00
9,600.00	89.85	179.20	7,128.94	-1,111.08	-758.67	1,100.38	0.00	0.00	0.00	0.00
9,700.00	89.85	179.20	7,129.21	-1,211.07	-757.27	1,200.38	0.00	0.00	0.00	0.00
9,800.00	89.85	179.20	7,129.47	-1,311.06	-755.87	1,300.38	0.00	0.00	0.00	0.00
9,900.00	89.85	179.20	7,129.73	-1,411.05	-754.46	1,400.38	0.00	0.00	0.00	0.00
10,000.00	89.85	179.20	7,130.00	-1,511.04	-753.06	1,500.38	0.00	0.00	0.00	0.00
10,100.00	89.85	179.20	7,130.26	-1,611.03	-751.66	1,600.38	0.00	0.00	0.00	0.00
10,200.00	89.85	179.20	7,130.52	-1,711.02	-750.26	1,700.38	0.00	0.00	0.00	0.00
10,300.00	89.85	179.20	7,130.79	-1,811.01	-748.86	1,800.38	0.00	0.00	0.00	0.00
10,400.00	89.85	179.20	7,131.05	-1,911.00	-747.46	1,900.37	0.00	0.00	0.00	0.00
10,500.00	89.85	179.20	7,131.31	-2,010.99	-746.06	2,000.37	0.00	0.00	0.00	0.00
10,600.00	89.85	179.20	7,131.58	-2,110.98	-744.65	2,100.37	0.00	0.00	0.00	0.00
10,700.00	89.85	179.20	7,131.84	-2,210.97	-743.25	2,200.37	0.00	0.00	0.00	0.00
10,800.00	89.85	179.20	7,132.10	-2,310.96	-741.85	2,300.37	0.00	0.00	0.00	0.00
10,900.00	89.85	179.20	7,132.36	-2,410.95	-740.45	2,400.37	0.00	0.00	0.00	0.00
11,000.00	89.85	179.20	7,132.63	-2,510.94	-739.05	2,500.37	0.00	0.00	0.00	0.00
11,100.00	89.85	179.20	7,132.89	-2,610.93	-737.65	2,600.37	0.00	0.00	0.00	0.00
11,200.00	89.85	179.20	7,133.15	-2,710.92	-736.25	2,700.37	0.00	0.00	0.00	0.00
11,300.00	89.85	179.20	7,133.42	-2,810.91	-734.85	2,800.37	0.00	0.00	0.00	0.00
11,400.00	89.85	179.20	7,133.68	-2,910.90	-733.44	2,900.37	0.00	0.00	0.00	0.00
11,500.00	89.85	179.20	7,133.94	-3,010.89	-732.04	3,000.37	0.00	0.00	0.00	0.00
11,600.00	89.85	179.20	7,134.21	-3,110.88	-730.64	3,100.37	0.00	0.00	0.00	0.00
11,700.00	89.85	179.20	7,134.47	-3,210.87	-729.24	3,200.37	0.00	0.00	0.00	0.00
11,800.00	89.85	179.20	7,134.73	-3,310.85	-727.84	3,300.37	0.00	0.00	0.00	0.00
11,900.00	89.85	179.20	7,135.00	-3,410.84	-726.44	3,400.37	0.00	0.00	0.00	0.00
12,000.00	89.85	179.20	7,135.26	-3,510.83	-725.04	3,500.37	0.00	0.00	0.00	0.00
12,100.00	89.85	179.20	7,135.52	-3,610.82	-723.63	3,600.37	0.00	0.00	0.00	0.00
12,200.00	89.85	179.20	7,135.79	-3,710.81	-722.23	3,700.37	0.00	0.00	0.00	0.00
12,300.00	89.85	179.20	7,136.05	-3,810.80	-720.83	3,800.37	0.00	0.00	0.00	0.00
12,400.00	89.85	179.20	7,136.31	-3,910.79	-719.43	3,900.37	0.00	0.00	0.00	0.00
12,500.00	89.85	179.20	7,136.58	-4,010.78	-718.03	4,000.37	0.00	0.00	0.00	0.00
12,600.00	89.85	179.20	7,136.84	-4,110.77	-716.63	4,100.37	0.00	0.00	0.00	0.00
12,700.00	89.85	179.20	7,137.10	-4,210.76	-715.23	4,200.37	0.00	0.00	0.00	0.00
12,800.00	89.85	179.20	7,137.37	-4,310.75	-713.82	4,300.37	0.00	0.00	0.00	0.00
12,900.00	89.85	179.20	7,137.63	-4,410.74	-712.42	4,400.37	0.00	0.00	0.00	0.00
13,000.00	89.85	179.20	7,137.89	-4,510.73	-711.02	4,500.37	0.00	0.00	0.00	0.00
13,100.00	89.85	179.20	7,138.16	-4,610.72	-709.62	4,600.37	0.00	0.00	0.00	0.00
13,200.00	89.85	179.20	7,138.42	-4,710.71	-708.22	4,700.37	0.00	0.00	0.00	0.00
13,300.00	89.85	179.20	7,138.68	-4,810.70	-706.82	4,800.36	0.00	0.00	0.00	0.00
13,400.00	89.85	179.20	7,138.95	-4,910.69	-705.42	4,900.36	0.00	0.00	0.00	0.00
13,420.22	89.85	179.20	7,139.00	-4,930.91	-705.13	4,920.58	0.00	0.00	0.00	0.00

TD Well @ 13420.22ft - Green 1N-8HZ_BHL

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

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,022.53	2,022.53	0.00	0.00	Begin Nudge @ 2022.53ft
3,072.53	3,049.18	169.54	-86.38	End Nudge @ 3072.53ft
6,537.53	6,284.03	1,275.94	-650.12	Top of 4.5" Liner @ 6537.53ft
6,637.53	6,377.39	1,307.87	-666.39	KOP @ 6637.53ft
7,200.00	6,902.87	1,218.73	-754.08	DLS = 10°/100'
7,723.61	7,124.00	765.12	-784.96	End Build @ 7723.61ft
13,420.22	7,139.00	-4,930.91	-705.13	TD Well @ 13420.22ft

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (usft)
				+N/-S (usft)	+E/-W (usft)	
User	No Target (Freehand)	179.20	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
0.00	7,723.61	Permit Rev-1	MWD+IFR1
7,723.61	13,420.22	Permit Rev-1	MWD+IFR1

Casing Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,498.00	1,498.00	9 5/8"	9-5/8	13-1/2
7,723.61	7,124.00	7"	7	8-3/4

Formation Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,022.00	1,022.00	Base Fox Hills		0.00	
1,498.00	1,498.00	Surface Csg Setting Depth		0.00	
4,247.38	4,146.00	Parkman		0.00	
4,616.93	4,491.00	Sussex		0.00	
7,285.94	6,966.00	SSPG		0.00	
7,338.20	7,000.00	NBRR		0.00	
7,576.11	7,105.00	N470_B_CK		0.00	
7,723.61	7,124.00	Landing Target (Heel)		0.00	
13,420.22	7,139.00	Total Depth (Toe)		0.00	

Targets associated with this wellbore

Target Name	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Shape
Green 1N-8HZ_SHL	0.00	0.00	0.00	Point
1N-R65W-Sec. 5_Section Lines	40.00	-52.47	4,039.99	Polygon
1N-R65W-Sec. 8_Section lines	8.00	-4,318.57	8,117.74	Polygon
Green 1N-8HZ_BHL	7,139.00	-4,930.91	-705.13	Point

North Reference Sheet for Green Pad - Green 1N-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' @ 4989.00usft (D Rig). Northing and Easting are relative to Green 1N-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: 0.99960837

Grid Coordinates of Well: 14,553,210.16 usft N, 1,725,971.51 usft E

Geographical Coordinates of Well: 40° 04' 20.30" N, 104° 41' 39.05" W

Grid Convergence at Surface is: 0.20°

Based upon Minimum Curvature type calculations, at a Measured Depth of 13,420.22usft the Bottom Hole Displacement is 4,981.07usft in the Direction of 188.14° (True).

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

