

US ROCKIES WATTENBERG PLANNING

WELD-NAD83-UTMFT13N

Bat Pad

BAT 29N2-9HZ

Plan A

Plan: Permit Rev-1

Sperry Drilling Services Proposal Report

29 October, 2014

Well Coordinates: 14,548,915.45 N, 1,732,920.19 E (40° 03' 37.60" N, 104° 40' 09.84" W)

Ground Level: 4,930.00 usft

Local Coordinate Origin:

Centered on Well BAT 29N2-9HZ

Viewing Datum:

RKB = 17' @ 4947.00usft (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: Bat Pad

Well: BAT 29N2-9HZ

Wellbore: Plan A

Design: Permit Rev-1

US ROCKIES WATTENBERG PLANNING

HALLIBURTON

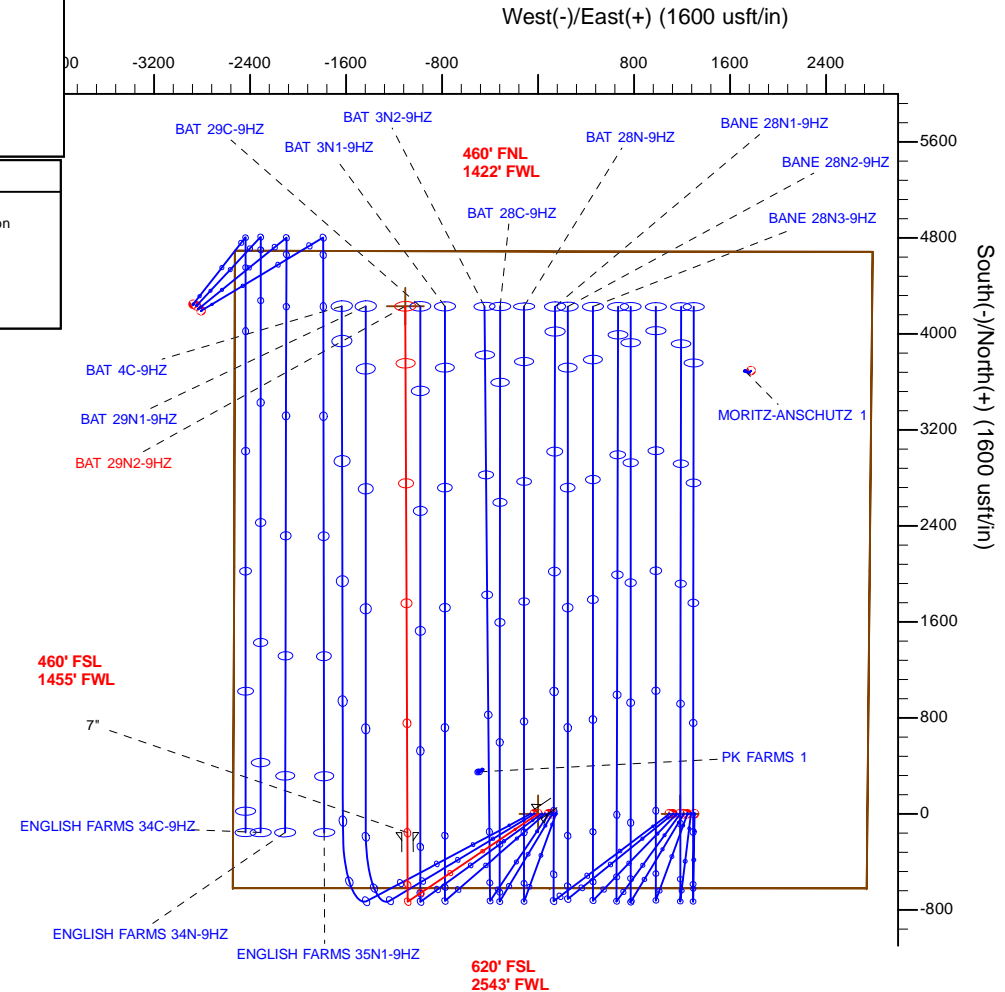
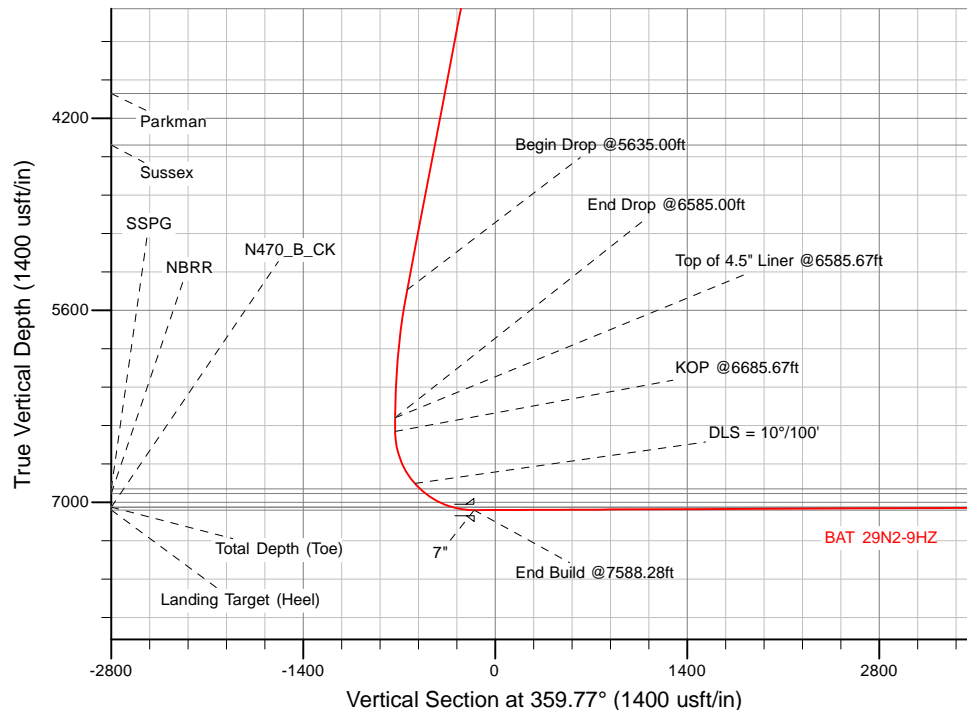
Sperry Drilling

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 | 1620.00 | 0.00 | 0.00 | 1620.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3 | 2570.00 | 19.00 | 236.00 | 2552.68 | -87.28 | -129.39 | 2.00 | 236.00 | -86.76 | |
| 4 | 5635.00 | 19.00 | 236.00 | 5450.70 | -645.28 | -956.66 | 0.00 | 0.00 | -641.43 | |
| 5 | 6585.00 | 0.00 | 0.00 | 6383.38 | -732.55 | -1086.06 | 2.00 | 180.00 | -728.19 | |
| 6 | 6685.67 | 0.00 | 0.00 | 6484.05 | -732.55 | -1086.06 | 0.00 | 0.00 | -728.19 | |
| 7 | 7588.28 | 90.26 | 359.77 | 7057.00 | -156.99 | -1088.33 | 10.00 | 359.77 | -152.62 | |
| 8 | 11974.96 | 90.26 | 359.77 | 7037.00 | 4229.60 | -1105.61 | 0.00 | 0.00 | 4234.01 | BAT 29N2-9HZ_BHL |

WELLBORE TARGET DETAILS (LAT/LONG)

| Name | TVD | +N/-S | +E/-W | Latitude | Longitude | Polygon |
|------------------------------|---------|---------|----------|-----------|-------------|---------|
| 1N-R65W-Sec. 9 Section lines | -34.00 | -0.34 | 1183.86 | 40.060443 | -104.665168 | |
| BAT 29N2-9HZ_SHL | 0.00 | 0.00 | 0.00 | 40.060444 | -104.669399 | |
| BAT 29N2-9HZ_BHL | 7037.00 | 4229.60 | -1105.61 | 40.072059 | -104.673351 | |



TVD MD

6384.05 6585.67 Top of 4.5" Liner @ 6585.67ft

6484.05 6685.67 KOP @ 6685.67ft

WELL DETAILS: BAT 29N2-9HZ

Ground Level: 4930.00

RKB = 17' @ 4947.00usft (D Rig)

Plan: Permit Rev-1 (BAT 29N2-9HZ/Plan A)

Created By: Clint Eshelman

Reviewed:

Date: 10/29/2014

Date:

Plan Report for BAT 29N2-9HZ - 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 |
| 1N-R65W-Sec. 9_Section lines - BAT 29N2-9HZ_SHL | | | | | | | | | | |
| 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 |
| 943.00 | 0.00 | 0.00 | 943.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Base Fox Hills | | | | | | | | | | |
| 1,000.00 | 0.00 | 0.00 | 1,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1,100.00 | 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 |
| 1,475.00 | 0.00 | 0.00 | 1,475.00 | 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 |
| 1,620.00 | 0.00 | 0.00 | 1,620.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Begin Nudge @1620.00ft | | | | | | | | | | |
| 1,700.00 | 1.60 | 236.00 | 1,699.99 | -0.62 | -0.93 | -0.62 | 2.00 | 2.00 | 0.00 | 236.00 |
| 1,800.00 | 3.60 | 236.00 | 1,799.88 | -3.16 | -4.69 | -3.14 | 2.00 | 2.00 | 0.00 | 0.00 |
| 1,900.00 | 5.60 | 236.00 | 1,899.55 | -7.65 | -11.34 | -7.60 | 2.00 | 2.00 | 0.00 | 0.00 |
| 2,000.00 | 7.60 | 236.00 | 1,998.89 | -14.07 | -20.86 | -13.99 | 2.00 | 2.00 | 0.00 | 0.00 |
| 2,100.00 | 9.60 | 236.00 | 2,097.76 | -22.43 | -33.26 | -22.30 | 2.00 | 2.00 | 0.00 | 0.00 |
| 2,200.00 | 11.60 | 236.00 | 2,196.05 | -32.72 | -48.51 | -32.52 | 2.00 | 2.00 | 0.00 | 0.00 |
| 2,300.00 | 13.60 | 236.00 | 2,293.63 | -44.92 | -66.59 | -44.65 | 2.00 | 2.00 | 0.00 | 0.00 |
| 2,400.00 | 15.60 | 236.00 | 2,390.40 | -59.01 | -87.49 | -58.66 | 2.00 | 2.00 | 0.00 | 0.00 |
| 2,500.00 | 17.60 | 236.00 | 2,486.23 | -74.99 | -111.17 | -74.54 | 2.00 | 2.00 | 0.00 | 0.00 |
| 2,570.00 | 19.00 | 236.00 | 2,552.68 | -87.28 | -129.39 | -86.76 | 2.00 | 2.00 | 0.00 | 0.00 |
| End Nudge @2570.00ft | | | | | | | | | | |
| 2,600.00 | 19.00 | 236.00 | 2,581.05 | -92.74 | -137.49 | -92.19 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2,700.00 | 19.00 | 236.00 | 2,675.60 | -110.94 | -164.48 | -110.28 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2,800.00 | 19.00 | 236.00 | 2,770.15 | -129.15 | -191.47 | -128.38 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2,900.00 | 19.00 | 236.00 | 2,864.71 | -147.36 | -218.46 | -146.48 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3,000.00 | 19.00 | 236.00 | 2,959.26 | -165.56 | -245.45 | -164.57 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3,100.00 | 19.00 | 236.00 | 3,053.81 | -183.77 | -272.45 | -182.67 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3,200.00 | 19.00 | 236.00 | 3,148.36 | -201.97 | -299.44 | -200.77 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3,300.00 | 19.00 | 236.00 | 3,242.91 | -220.18 | -326.43 | -218.87 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3,400.00 | 19.00 | 236.00 | 3,337.46 | -238.38 | -353.42 | -236.96 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 19.00 | 236.00 | 3,432.02 | -256.59 | -380.41 | -255.06 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 19.00 | 236.00 | 3,526.57 | -274.79 | -407.40 | -273.16 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3,700.00 | 19.00 | 236.00 | 3,621.12 | -293.00 | -434.39 | -291.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3,800.00 | 19.00 | 236.00 | 3,715.67 | -311.21 | -461.38 | -309.35 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3,900.00 | 19.00 | 236.00 | 3,810.22 | -329.41 | -488.37 | -327.45 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4,000.00 | 19.00 | 236.00 | 3,904.78 | -347.62 | -515.36 | -345.55 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4,100.00 | 19.00 | 236.00 | 3,999.33 | -365.82 | -542.35 | -363.64 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4,120.81 | 19.00 | 236.00 | 4,019.00 | -369.61 | -547.97 | -367.41 | 0.00 | 0.00 | 0.00 | 0.00 |
| Parkman | | | | | | | | | | |
| 4,200.00 | 19.00 | 236.00 | 4,093.88 | -384.03 | -569.34 | -381.74 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4,300.00 | 19.00 | 236.00 | 4,188.43 | -402.23 | -596.34 | -399.84 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4,400.00 | 19.00 | 236.00 | 4,282.98 | -420.44 | -623.33 | -417.93 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4,500.00 | 19.00 | 236.00 | 4,377.53 | -438.64 | -650.32 | -436.03 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4,517.41 | 19.00 | 236.00 | 4,394.00 | -441.81 | -655.02 | -439.18 | 0.00 | 0.00 | 0.00 | 0.00 |

Plan Report for BAT 29N2-9HZ - 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 (°) |
|--|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|----------------------|
| Sussex | | | | | | | | | | |
| 4,600.00 | 19.00 | 236.00 | 4,472.09 | -456.85 | -677.31 | -454.13 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4,700.00 | 19.00 | 236.00 | 4,566.64 | -475.06 | -704.30 | -472.22 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4,800.00 | 19.00 | 236.00 | 4,661.19 | -493.26 | -731.29 | -490.32 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4,900.00 | 19.00 | 236.00 | 4,755.74 | -511.47 | -758.28 | -508.42 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5,000.00 | 19.00 | 236.00 | 4,850.29 | -529.67 | -785.27 | -526.52 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5,100.00 | 19.00 | 236.00 | 4,944.85 | -547.88 | -812.26 | -544.61 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5,200.00 | 19.00 | 236.00 | 5,039.40 | -566.08 | -839.25 | -562.71 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5,300.00 | 19.00 | 236.00 | 5,133.95 | -584.29 | -866.24 | -580.81 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5,400.00 | 19.00 | 236.00 | 5,228.50 | -602.49 | -893.23 | -598.90 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5,500.00 | 19.00 | 236.00 | 5,323.05 | -620.70 | -920.23 | -617.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5,600.00 | 19.00 | 236.00 | 5,417.61 | -638.91 | -947.22 | -635.10 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5,635.00 | 19.00 | 236.00 | 5,450.70 | -645.28 | -956.66 | -641.43 | 0.00 | 0.00 | 0.00 | 0.00 |
| Begin Drop @5635.00ft | | | | | | | | | | |
| 5,700.00 | 17.70 | 236.00 | 5,512.39 | -656.72 | -973.63 | -652.81 | 2.00 | -2.00 | 0.00 | 180.00 |
| 5,800.00 | 15.70 | 236.00 | 5,608.17 | -672.79 | -997.45 | -668.78 | 2.00 | -2.00 | 0.00 | 180.00 |
| 5,900.00 | 13.70 | 236.00 | 5,704.89 | -686.98 | -1,018.49 | -682.88 | 2.00 | -2.00 | 0.00 | 180.00 |
| 6,000.00 | 11.70 | 236.00 | 5,802.44 | -699.27 | -1,036.71 | -695.10 | 2.00 | -2.00 | 0.00 | 180.00 |
| 6,100.00 | 9.70 | 236.00 | 5,900.70 | -709.65 | -1,052.10 | -705.42 | 2.00 | -2.00 | 0.00 | 180.00 |
| 6,200.00 | 7.70 | 236.00 | 5,999.54 | -718.11 | -1,064.64 | -713.83 | 2.00 | -2.00 | 0.00 | 180.00 |
| 6,300.00 | 5.70 | 236.00 | 6,098.85 | -724.63 | -1,074.31 | -720.32 | 2.00 | -2.00 | 0.00 | 180.00 |
| 6,400.00 | 3.70 | 236.00 | 6,198.51 | -729.22 | -1,081.11 | -724.87 | 2.00 | -2.00 | 0.00 | 180.00 |
| 6,500.00 | 1.70 | 236.00 | 6,298.40 | -731.85 | -1,085.01 | -727.49 | 2.00 | -2.00 | 0.00 | 180.00 |
| 6,585.00 | 0.00 | 0.00 | 6,383.38 | -732.55 | -1,086.06 | -728.19 | 2.00 | -2.00 | 145.88 | 180.00 |
| End Drop @6585.00ft | | | | | | | | | | |
| 6,585.67 | 0.00 | 0.00 | 6,384.05 | -732.55 | -1,086.06 | -728.19 | 0.00 | 0.00 | 0.00 | 180.00 |
| Top of 4.5" Liner @6585.67ft | | | | | | | | | | |
| 6,600.00 | 0.00 | 0.00 | 6,398.38 | -732.55 | -1,086.06 | -728.19 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6,685.67 | 0.00 | 0.00 | 6,484.05 | -732.55 | -1,086.06 | -728.19 | 0.00 | 0.00 | 0.00 | 0.00 |
| KOP @6685.67ft | | | | | | | | | | |
| 6,700.00 | 1.43 | 359.77 | 6,498.38 | -732.38 | -1,086.06 | -728.01 | 10.00 | 10.00 | -1.58 | -0.23 |
| 6,800.00 | 11.43 | 359.77 | 6,597.63 | -721.19 | -1,086.10 | -716.82 | 10.00 | 10.00 | 0.00 | 0.00 |
| 6,900.00 | 21.43 | 359.77 | 6,693.42 | -692.93 | -1,086.21 | -688.57 | 10.00 | 10.00 | 0.00 | 0.00 |
| 7,000.00 | 31.43 | 359.77 | 6,782.85 | -648.47 | -1,086.39 | -644.11 | 10.00 | 10.00 | 0.00 | 0.00 |
| 7,100.00 | 41.43 | 359.77 | 6,863.20 | -589.16 | -1,086.62 | -584.80 | 10.00 | 10.00 | 0.00 | 0.00 |
| DLS = 10°/100' | | | | | | | | | | |
| 7,154.08 | 46.84 | 359.77 | 6,902.00 | -551.52 | -1,086.77 | -547.15 | 10.00 | 10.00 | 0.00 | 0.00 |
| SSPG | | | | | | | | | | |
| 7,200.00 | 51.43 | 359.77 | 6,932.04 | -516.80 | -1,086.91 | -512.43 | 10.00 | 10.00 | 0.00 | 0.00 |
| 7,204.78 | 51.91 | 359.77 | 6,935.00 | -513.05 | -1,086.92 | -508.68 | 10.00 | 10.00 | 0.00 | 0.00 |
| NBRR | | | | | | | | | | |
| 7,300.00 | 61.43 | 359.77 | 6,987.26 | -433.58 | -1,087.24 | -429.21 | 10.00 | 10.00 | 0.00 | 0.00 |
| 7,400.00 | 71.43 | 359.77 | 7,027.19 | -342.04 | -1,087.60 | -337.67 | 10.00 | 10.00 | 0.00 | 0.00 |
| 7,426.34 | 74.07 | 359.77 | 7,035.00 | -316.88 | -1,087.70 | -312.51 | 10.00 | 10.00 | 0.00 | 0.00 |
| N470_B_CK | | | | | | | | | | |
| 7,500.00 | 81.43 | 359.77 | 7,050.62 | -244.95 | -1,087.98 | -240.58 | 10.00 | 10.00 | 0.00 | 0.00 |
| 7,588.28 | 90.26 | 359.77 | 7,057.00 | -156.99 | -1,088.33 | -152.62 | 10.00 | 10.00 | 0.00 | 0.00 |
| End Build @7588.28ft - Landing Target (Heel) - 7" | | | | | | | | | | |
| 7,600.00 | 90.26 | 359.77 | 7,056.95 | -145.27 | -1,088.37 | -140.90 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7,700.00 | 90.26 | 359.77 | 7,056.50 | -45.27 | -1,088.77 | -40.90 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7,800.00 | 90.26 | 359.77 | 7,056.04 | 54.72 | -1,089.16 | 59.10 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7,900.00 | 90.26 | 359.77 | 7,055.58 | 154.72 | -1,089.55 | 159.10 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8,000.00 | 90.26 | 359.77 | 7,055.13 | 254.72 | -1,089.95 | 259.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8,100.00 | 90.26 | 359.77 | 7,054.67 | 354.72 | -1,090.34 | 359.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8,200.00 | 90.26 | 359.77 | 7,054.21 | 454.72 | -1,090.74 | 459.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8,300.00 | 90.26 | 359.77 | 7,053.76 | 554.72 | -1,091.13 | 559.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8,400.00 | 90.26 | 359.77 | 7,053.30 | 654.71 | -1,091.52 | 659.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8,500.00 | 90.26 | 359.77 | 7,052.85 | 754.71 | -1,091.92 | 759.09 | 0.00 | 0.00 | 0.00 | 0.00 |

Plan Report for BAT 29N2-9HZ - 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 | 90.26 | 359.77 | 7,052.39 | 854.71 | -1,092.31 | 859.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8,700.00 | 90.26 | 359.77 | 7,051.93 | 954.71 | -1,092.71 | 959.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8,800.00 | 90.26 | 359.77 | 7,051.48 | 1,054.71 | -1,093.10 | 1,059.09 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8,900.00 | 90.26 | 359.77 | 7,051.02 | 1,154.70 | -1,093.49 | 1,159.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9,000.00 | 90.26 | 359.77 | 7,050.57 | 1,254.70 | -1,093.89 | 1,259.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9,100.00 | 90.26 | 359.77 | 7,050.11 | 1,354.70 | -1,094.28 | 1,359.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9,200.00 | 90.26 | 359.77 | 7,049.65 | 1,454.70 | -1,094.68 | 1,459.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9,300.00 | 90.26 | 359.77 | 7,049.20 | 1,554.70 | -1,095.07 | 1,559.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9,400.00 | 90.26 | 359.77 | 7,048.74 | 1,654.70 | -1,095.46 | 1,659.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9,500.00 | 90.26 | 359.77 | 7,048.29 | 1,754.69 | -1,095.86 | 1,759.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9,600.00 | 90.26 | 359.77 | 7,047.83 | 1,854.69 | -1,096.25 | 1,859.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9,700.00 | 90.26 | 359.77 | 7,047.37 | 1,954.69 | -1,096.65 | 1,959.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9,800.00 | 90.26 | 359.77 | 7,046.92 | 2,054.69 | -1,097.04 | 2,059.08 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9,900.00 | 90.26 | 359.77 | 7,046.46 | 2,154.69 | -1,097.43 | 2,159.07 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10,000.00 | 90.26 | 359.77 | 7,046.01 | 2,254.68 | -1,097.83 | 2,259.07 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10,100.00 | 90.26 | 359.77 | 7,045.55 | 2,354.68 | -1,098.22 | 2,359.07 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10,200.00 | 90.26 | 359.77 | 7,045.09 | 2,454.68 | -1,098.62 | 2,459.07 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10,300.00 | 90.26 | 359.77 | 7,044.64 | 2,554.68 | -1,099.01 | 2,559.07 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10,400.00 | 90.26 | 359.77 | 7,044.18 | 2,654.68 | -1,099.40 | 2,659.07 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10,500.00 | 90.26 | 359.77 | 7,043.73 | 2,754.68 | -1,099.80 | 2,759.07 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10,600.00 | 90.26 | 359.77 | 7,043.27 | 2,854.67 | -1,100.19 | 2,859.07 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10,700.00 | 90.26 | 359.77 | 7,042.81 | 2,954.67 | -1,100.59 | 2,959.07 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10,800.00 | 90.26 | 359.77 | 7,042.36 | 3,054.67 | -1,100.98 | 3,059.06 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10,900.00 | 90.26 | 359.77 | 7,041.90 | 3,154.67 | -1,101.37 | 3,159.06 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11,000.00 | 90.26 | 359.77 | 7,041.45 | 3,254.67 | -1,101.77 | 3,259.06 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11,100.00 | 90.26 | 359.77 | 7,040.99 | 3,354.66 | -1,102.16 | 3,359.06 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11,200.00 | 90.26 | 359.77 | 7,040.53 | 3,454.66 | -1,102.56 | 3,459.06 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11,300.00 | 90.26 | 359.77 | 7,040.08 | 3,554.66 | -1,102.95 | 3,559.06 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11,400.00 | 90.26 | 359.77 | 7,039.62 | 3,654.66 | -1,103.34 | 3,659.06 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11,500.00 | 90.26 | 359.77 | 7,039.17 | 3,754.66 | -1,103.74 | 3,759.06 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11,600.00 | 90.26 | 359.77 | 7,038.71 | 3,854.66 | -1,104.13 | 3,859.06 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11,700.00 | 90.26 | 359.77 | 7,038.25 | 3,954.65 | -1,104.53 | 3,959.06 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11,800.00 | 90.26 | 359.77 | 7,037.80 | 4,054.65 | -1,104.92 | 4,059.05 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11,900.00 | 90.26 | 359.77 | 7,037.34 | 4,154.65 | -1,105.31 | 4,159.05 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11,974.95 | 90.26 | 359.77 | 7,037.00 | 4,229.60 | -1,105.61 | 4,234.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Total Depth (Toe) | | | | | | | | | | |
| 11,974.96 | 90.26 | 359.77 | 7,037.00 | 4,229.60 | -1,105.61 | 4,234.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| TD Well @11974.96ft - BAT 29N2-9HZ_BHL | | | | | | | | | | |

Plan Annotations

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates +N/-S (usft) | +E/-W (usft) | Comment |
|-----------------------|-----------------------|--------------------------------|--------------|------------------------------|
| 1,620.00 | 1,620.00 | 0.00 | 0.00 | Begin Nudge @1620.00ft |
| 2,570.00 | 2,552.68 | -87.28 | -129.39 | End Nudge @2570.00ft |
| 5,635.00 | 5,450.70 | -645.28 | -956.66 | Begin Drop @5635.00ft |
| 6,585.00 | 6,383.38 | -732.55 | -1,086.06 | End Drop @6585.00ft |
| 6,585.67 | 6,384.05 | -732.55 | -1,086.06 | Top of 4.5" Liner @6585.67ft |
| 6,685.67 | 6,484.05 | -732.55 | -1,086.06 | KOP @6685.67ft |
| 7,100.00 | 6,863.20 | -589.16 | -1,086.62 | DLS = 10°/100' |
| 7,588.28 | 7,057.00 | -156.99 | -1,088.33 | End Build @7588.28ft |
| 11,974.96 | 7,037.00 | 4,229.60 | -1,105.61 | TD Well @11974.96ft |

Plan Report for BAT 29N2-9HZ - Permit Rev-1

Vertical Section Information

| Angle Type | Target | Azimuth (°) | Origin Type | Origin +N/_S (usft) | Origin +E/-W (usft) | Start TVD (usft) |
|---------------|----------------------|----------------|----------------|---------------------------|---------------------------|------------------------|
| User | No Target (Freehand) | 359.77 | Slot | 0.00 | 0.00 | 0.00 |

Survey tool program

| From (usft) | To (usft) | Survey/Plan | Survey Tool |
|----------------|--------------|--------------|-------------|
| 0.00 | 7,588.28 | Permit Rev-1 | MWD+IFR1 |
| 7,588.28 | 11,974.96 | Permit Rev-1 | MWD+IFR1 |

Casing Details

| Measured Depth (usft) | Vertical Depth (usft) | Name | Casing Diameter (") | Hole Diameter (") |
|-----------------------------|-----------------------------|--------|---------------------------|-------------------------|
| 1,475.00 | 1,475.00 | 9 5/8" | 9-5/8 | 13-1/2 |
| 7,588.28 | 7,057.00 | 7" | 7 | 8-3/4 |

Formation Details

| Measured Depth (usft) | Vertical Depth (usft) | Name | Lithology | Dip (°) | Dip Direction (°) |
|-----------------------------|-----------------------------|---------------------------|-----------|------------|-------------------------|
| 943.00 | 943.00 | Base Fox Hills | | 0.00 | |
| 1,475.00 | 1,475.00 | Surface Csg Setting Depth | | 0.00 | |
| 4,120.81 | 4,019.00 | Parkman | | 0.00 | |
| 4,517.41 | 4,394.00 | Sussex | | 0.00 | |
| 7,154.08 | 6,902.00 | SSPG | | 0.00 | |
| 7,204.78 | 6,935.00 | NBRR | | 0.00 | |
| 7,426.34 | 7,035.00 | N470_B_CK | | 0.00 | |
| 7,588.28 | 7,057.00 | Landing Target (Heel) | | 0.00 | |
| 11,974.95 | 7,037.00 | Total Depth (Toe) | | 0.00 | |

Targets associated with this wellbore

| Target Name | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Shape |
|------------------------------|---------------|-----------------|-----------------|---------|
| BAT 29N2-9HZ_BHL | 7,037.00 | 4,229.60 | -1,105.61 | Point |
| 1N-R65W-Sec. 9_Section lines | -34.00 | -0.34 | 1,183.86 | Polygon |
| BAT 29N2-9HZ_SHL | 0.00 | 0.00 | 0.00 | Point |

North Reference Sheet for Bat Pad - BAT 29N2-9HZ - 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' @ 4947.00usft (D Rig). Northing and Easting are relative to BAT 29N2-9HZ

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: 0.99960979

Grid Coordinates of Well: 14,548,915.45 usft N, 1,732,920.19 usft E

Geographical Coordinates of Well: 40° 03' 37.60" N, 104° 40' 09.84" W

Grid Convergence at Surface is: 0.21°

Based upon Minimum Curvature type calculations, at a Measured Depth of 11,974.96usft the Bottom Hole Displacement is 4,371.72usft in the Direction of 345.35° (True).

Magnetic Convergence at surface is: -8.12° (20 October 2014, , IGRF2010)

