

Anadarko Petroleum Corp.

Weld County, CO (NAD 83)

Sec. 28-T2N-R67W

HUNZIKER 1N-4HZ

Plan A

Plan: Rev A0 Permit

Sperry Drilling Services

Proposal Report

02 October, 2014

Well Coordinates: 1,281,033.33 N, 3,170,070.87 E (40° 06' 11.62" N, 104° 53' 31.24" W)

Ground Level: 5,050.00 usft

Local Coordinate Origin:

Centered on Well HUNZIKER 1N-4HZ

Viewing Datum:

RKB = 17' @ 5067.00usft (Drilling Rig)

TVDs to System:

N

North Reference:

True

Unit System:

API - US Survey Feet - Custom

Geodetic Scale Factor Applied

Version: 5000.1 Build: 70

HALLIBURTON

Project: Weld County, CO (NAD 83)
 Site: Sec. 28-T2N-R67W
 Well: HUNZIKER 1N-4HZ
 Wellbore: Plan A
 Design: Rev A0 Permit

Anadarko Petroleum Corp.

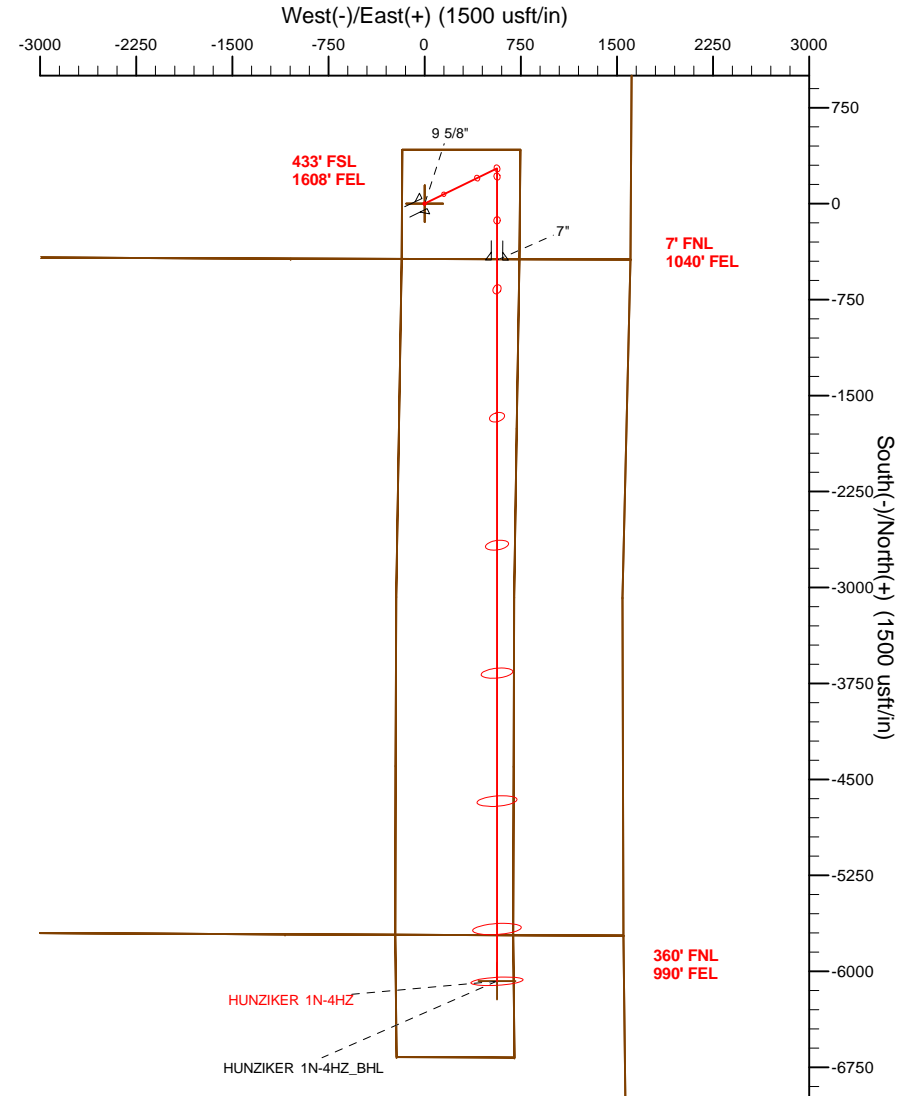
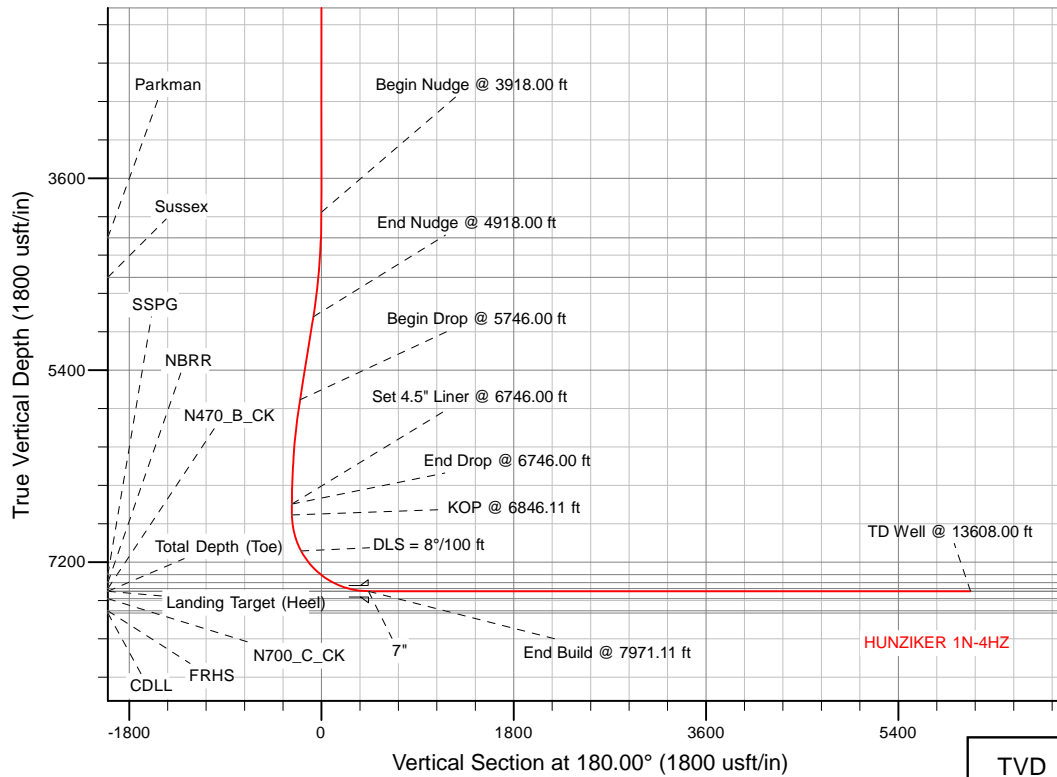


SECTION DETAILS

| 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 | 3918.00 | 0.00 | 0.00 | 3918.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | |
| 3 | 4918.00 | 20.00 | 64.00 | 4897.82 | 75.74 | 155.28 | 2.00 | 64.00 | -75.74 | |
| 4 | 5746.00 | 20.00 | 64.00 | 5675.88 | 199.88 | 409.81 | 0.00 | 0.00 | -199.88 | |
| 5 | 6746.00 | 0.00 | 0.00 | 6655.70 | 275.62 | 565.10 | 2.00 | 180.00 | -275.62 | |
| 6 | 6846.11 | 0.00 | 0.00 | 6755.81 | 275.62 | 565.10 | 0.00 | 0.00 | -275.62 | |
| 7 | 7971.11 | 90.00 | 180.00 | 7472.00 | -440.58 | 565.08 | 8.00 | 180.00 | 440.58 | |
| 8 | 13608.00 | 90.00 | 180.00 | 7472.00 | -6077.47 | 564.93 | 0.00 | 0.00 | 6077.47 | HUNZIKER 1N-4HZ_BHL |

WELLBORE TARGET DETAILS (LAT/LONG)

| Name | TVD | +N/-S | +E/-W | Latitude | Longitude | Shape |
|---------------------|---------|----------|--------|-----------|-------------|---------|
| HUNZIKER 1N-4HZ_LD | 0.00 | 0.00 | 0.00 | 40.103228 | -104.892012 | Polygon |
| HUNZIKER 1N-4HZ_SEC | 0.00 | 0.00 | 0.00 | 40.103228 | -104.892012 | Polygon |
| HUNZIKER 1N-4HZ_SHL | 0.00 | 0.00 | 0.00 | 40.103228 | -104.892012 | Point |
| HUNZIKER 1N-4HZ_BHL | 7472.00 | -6077.47 | 564.93 | 40.086545 | -104.899993 | Point |



| TVD | MD | Annotation |
|---------|---------|------------------|
| 6755.81 | 6846.11 | KOP @ 6846.11 ft |

| WELL DETAILS: HUNZIKER 1N-4HZ | |
|--|-----------------|
| Ground Level: | 5050.00 |
| RKB = 17' @ 5067.00usft (Drilling Rig) | |
| Plan: Rev A0 Permit (HUNZIKER 1N-4HZ/Plan A) | |
| Created By: Katie Benner | Date: 10/8/2014 |
| Reviewed: _____ | Date: _____ |

Plan Report for HUNZIKER 1N-4HZ - Rev A0 Permit

| 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 |
| Tie-On to Surface @ 0.00 ft - HUNZIKER 1N-4HZ_SEC - HUNZIKER 1N-4HZ_LD - HUNZIKER 1N-4HZ_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 |
| 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 |
| 1,258.00 | 0.00 | 0.00 | 1,258.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9 5/8" | | | | | | | | | | |
| 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 |
| 1,500.00 | 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 |
| 2,100.00 | 0.00 | 0.00 | 2,100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2,200.00 | 0.00 | 0.00 | 2,200.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2,300.00 | 0.00 | 0.00 | 2,300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2,400.00 | 0.00 | 0.00 | 2,400.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2,500.00 | 0.00 | 0.00 | 2,500.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2,600.00 | 0.00 | 0.00 | 2,600.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2,700.00 | 0.00 | 0.00 | 2,700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2,800.00 | 0.00 | 0.00 | 2,800.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2,900.00 | 0.00 | 0.00 | 2,900.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3,000.00 | 0.00 | 0.00 | 3,000.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3,100.00 | 0.00 | 0.00 | 3,100.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3,200.00 | 0.00 | 0.00 | 3,200.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3,300.00 | 0.00 | 0.00 | 3,300.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3,400.00 | 0.00 | 0.00 | 3,400.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3,500.00 | 0.00 | 0.00 | 3,500.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3,600.00 | 0.00 | 0.00 | 3,600.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3,700.00 | 0.00 | 0.00 | 3,700.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3,800.00 | 0.00 | 0.00 | 3,800.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3,900.00 | 0.00 | 0.00 | 3,900.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3,918.00 | 0.00 | 0.00 | 3,918.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Begin Nudge @ 3918.00 ft | | | | | | | | | | |
| 4,000.00 | 1.64 | 64.00 | 3,999.99 | 0.51 | 1.05 | -0.51 | 2.00 | 2.00 | 0.00 | 64.00 |
| 4,100.00 | 3.64 | 64.00 | 4,099.88 | 2.53 | 5.19 | -2.53 | 2.00 | 2.00 | 0.00 | 0.00 |
| 4,158.28 | 4.81 | 64.00 | 4,158.00 | 4.41 | 9.05 | -4.41 | 2.00 | 2.00 | 0.00 | 0.00 |
| Parkman | | | | | | | | | | |
| 4,200.00 | 5.64 | 64.00 | 4,199.54 | 6.08 | 12.46 | -6.08 | 2.00 | 2.00 | 0.00 | 0.00 |
| 4,300.00 | 7.64 | 64.00 | 4,298.87 | 11.15 | 22.86 | -11.15 | 2.00 | 2.00 | 0.00 | 0.00 |
| 4,400.00 | 9.64 | 64.00 | 4,397.73 | 17.73 | 36.36 | -17.73 | 2.00 | 2.00 | 0.00 | 0.00 |
| 4,500.00 | 11.64 | 64.00 | 4,496.00 | 25.83 | 52.95 | -25.83 | 2.00 | 2.00 | 0.00 | 0.00 |
| 4,532.71 | 12.29 | 64.00 | 4,528.00 | 28.80 | 59.05 | -28.80 | 2.00 | 2.00 | 0.00 | 0.00 |
| Sussex | | | | | | | | | | |
| 4,600.00 | 13.64 | 64.00 | 4,593.58 | 35.42 | 72.62 | -35.42 | 2.00 | 2.00 | 0.00 | 0.00 |
| 4,700.00 | 15.64 | 64.00 | 4,690.32 | 46.50 | 95.34 | -46.50 | 2.00 | 2.00 | 0.00 | 0.00 |
| 4,800.00 | 17.64 | 64.00 | 4,786.13 | 59.05 | 121.07 | -59.05 | 2.00 | 2.00 | 0.00 | 0.00 |

Plan Report for HUNZIKER 1N-4HZ - Rev A0 Permit

| 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 (°) |
|--|-----------------|-------------|-----------------------|--------------|--------------|-------------------------|-------------------------|------------------------|-----------------------|----------------------|
| 4,900.00 | 19.64 | 64.00 | 4,880.88 | 73.06 | 149.80 | -73.06 | 2.00 | 2.00 | 0.00 | 0.00 |
| 4,918.00 | 20.00 | 64.00 | 4,897.82 | 75.74 | 155.28 | -75.74 | 2.00 | 2.00 | 0.00 | 0.00 |
| End Nudge @ 4918.00 ft | | | | | | | | | | |
| 5,000.00 | 20.00 | 64.00 | 4,974.87 | 88.03 | 180.49 | -88.03 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5,100.00 | 20.00 | 64.00 | 5,068.84 | 103.02 | 211.23 | -103.02 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5,200.00 | 20.00 | 64.00 | 5,162.81 | 118.02 | 241.97 | -118.02 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5,300.00 | 20.00 | 64.00 | 5,256.78 | 133.01 | 272.71 | -133.01 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5,400.00 | 20.00 | 64.00 | 5,350.75 | 148.00 | 303.45 | -148.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5,500.00 | 20.00 | 64.00 | 5,444.72 | 163.00 | 334.19 | -163.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5,600.00 | 20.00 | 64.00 | 5,538.69 | 177.99 | 364.93 | -177.99 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5,700.00 | 20.00 | 64.00 | 5,632.66 | 192.98 | 395.67 | -192.98 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5,746.00 | 20.00 | 64.00 | 5,675.88 | 199.88 | 409.81 | -199.88 | 0.00 | 0.00 | 0.00 | 0.00 |
| Begin Drop @ 5746.00 ft | | | | | | | | | | |
| 5,800.00 | 18.92 | 64.00 | 5,726.80 | 207.77 | 425.98 | -207.77 | 2.00 | -2.00 | 0.00 | 180.00 |
| 5,900.00 | 16.92 | 64.00 | 5,821.94 | 221.25 | 453.64 | -221.25 | 2.00 | -2.00 | 0.00 | 180.00 |
| 6,000.00 | 14.92 | 64.00 | 5,918.10 | 233.28 | 478.29 | -233.28 | 2.00 | -2.00 | 0.00 | 180.00 |
| 6,100.00 | 12.92 | 64.00 | 6,015.16 | 243.82 | 499.91 | -243.82 | 2.00 | -2.00 | 0.00 | 180.00 |
| 6,200.00 | 10.92 | 64.00 | 6,113.00 | 252.88 | 518.47 | -252.88 | 2.00 | -2.00 | 0.00 | 180.00 |
| 6,300.00 | 8.92 | 64.00 | 6,211.50 | 260.43 | 533.96 | -260.43 | 2.00 | -2.00 | 0.00 | 180.00 |
| 6,400.00 | 6.92 | 64.00 | 6,310.54 | 266.47 | 546.34 | -266.47 | 2.00 | -2.00 | 0.00 | 180.00 |
| 6,500.00 | 4.92 | 64.00 | 6,410.00 | 270.99 | 555.61 | -270.99 | 2.00 | -2.00 | 0.00 | 180.00 |
| 6,600.00 | 2.92 | 64.00 | 6,509.76 | 273.99 | 561.75 | -273.99 | 2.00 | -2.00 | 0.00 | -180.00 |
| 6,700.00 | 0.92 | 64.00 | 6,609.70 | 275.45 | 564.77 | -275.45 | 2.00 | -2.00 | 0.00 | 180.00 |
| 6,746.00 | 0.00 | 0.00 | 6,655.70 | 275.62 | 565.10 | -275.62 | 2.00 | -2.00 | 0.00 | -180.00 |
| Set 4.5" Liner @ 6746.00 ft - End Drop @ 6746.00 ft | | | | | | | | | | |
| 6,800.00 | 0.00 | 0.00 | 6,709.70 | 275.62 | 565.10 | -275.62 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6,846.11 | 0.00 | 0.00 | 6,755.81 | 275.62 | 565.10 | -275.62 | 0.00 | 0.00 | 0.00 | 0.00 |
| KOP @ 6846.11 ft | | | | | | | | | | |
| 6,900.00 | 4.31 | 180.00 | 6,809.65 | 273.59 | 565.10 | -273.59 | 8.00 | 8.00 | 0.00 | 180.00 |
| 7,000.00 | 12.31 | 180.00 | 6,908.52 | 259.15 | 565.10 | -259.15 | 8.00 | 8.00 | 0.00 | 0.00 |
| 7,100.00 | 20.31 | 180.00 | 7,004.41 | 231.08 | 565.10 | -231.08 | 8.00 | 8.00 | 0.00 | 0.00 |
| 7,200.00 | 28.31 | 180.00 | 7,095.47 | 189.95 | 565.10 | -189.95 | 8.00 | 8.00 | 0.00 | 0.00 |
| DLS = 8°/100 ft | | | | | | | | | | |
| 7,300.00 | 36.31 | 180.00 | 7,179.92 | 136.54 | 565.09 | -136.54 | 8.00 | 8.00 | 0.00 | 0.00 |
| 7,400.00 | 44.31 | 180.00 | 7,256.11 | 71.90 | 565.09 | -71.90 | 8.00 | 8.00 | 0.00 | 0.00 |
| 7,490.97 | 51.59 | 180.00 | 7,317.00 | 4.39 | 565.09 | -4.39 | 8.00 | 8.00 | 0.00 | 0.00 |
| SSPG | | | | | | | | | | |
| 7,500.00 | 52.31 | 180.00 | 7,322.56 | -2.72 | 565.09 | 2.72 | 8.00 | 8.00 | 0.00 | 0.00 |
| 7,600.00 | 60.31 | 180.00 | 7,377.99 | -85.86 | 565.09 | 85.86 | 8.00 | 8.00 | 0.00 | 0.00 |
| 7,629.36 | 62.66 | 180.00 | 7,392.00 | -111.65 | 565.09 | 111.65 | 8.00 | 8.00 | 0.00 | 0.00 |
| NBRR | | | | | | | | | | |
| 7,700.00 | 68.31 | 180.00 | 7,421.30 | -175.90 | 565.09 | 175.90 | 8.00 | 8.00 | 0.00 | 0.00 |
| 7,781.31 | 74.82 | 180.00 | 7,447.00 | -252.99 | 565.08 | 252.99 | 8.00 | 8.00 | 0.00 | 0.00 |
| N470_B_CK | | | | | | | | | | |
| 7,800.00 | 76.31 | 180.00 | 7,451.66 | -271.09 | 565.08 | 271.09 | 8.00 | 8.00 | 0.00 | 0.00 |
| 7,900.00 | 84.31 | 180.00 | 7,468.48 | -369.59 | 565.08 | 369.59 | 8.00 | 8.00 | 0.00 | 0.00 |
| 7,971.11 | 90.00 | 180.00 | 7,472.00 | -440.58 | 565.08 | 440.58 | 8.00 | 8.00 | 0.00 | 0.00 |
| End Build @ 7971.11 ft - Landing Target (Heel) - 7" | | | | | | | | | | |
| 8,000.00 | 90.00 | 180.00 | 7,472.00 | -469.47 | 565.08 | 469.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8,100.00 | 90.00 | 180.00 | 7,472.00 | -569.47 | 565.08 | 569.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8,200.00 | 90.00 | 180.00 | 7,472.00 | -669.47 | 565.07 | 669.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8,300.00 | 90.00 | 180.00 | 7,472.00 | -769.47 | 565.07 | 769.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8,400.00 | 90.00 | 180.00 | 7,472.00 | -869.47 | 565.07 | 869.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8,500.00 | 90.00 | 180.00 | 7,472.00 | -969.47 | 565.07 | 969.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8,600.00 | 90.00 | 180.00 | 7,472.00 | -1,069.47 | 565.06 | 1,069.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8,700.00 | 90.00 | 180.00 | 7,472.00 | -1,169.47 | 565.06 | 1,169.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8,800.00 | 90.00 | 180.00 | 7,472.00 | -1,269.47 | 565.06 | 1,269.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8,900.00 | 90.00 | 180.00 | 7,472.00 | -1,369.47 | 565.06 | 1,369.47 | 0.00 | 0.00 | 0.00 | 0.00 |

Plan Report for HUNZIKER 1N-4HZ - Rev A0 Permit

| 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 (°) |
|-----------------------------|--------------------|----------------|-----------------------------|-----------------|-----------------|-------------------------------|-------------------------------|------------------------------|-----------------------------|----------------------------|
| 9,000.00 | 90.00 | 180.00 | 7,472.00 | -1,469.47 | 565.05 | 1,469.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9,100.00 | 90.00 | 180.00 | 7,472.00 | -1,569.47 | 565.05 | 1,569.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9,200.00 | 90.00 | 180.00 | 7,472.00 | -1,669.47 | 565.05 | 1,669.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9,300.00 | 90.00 | 180.00 | 7,472.00 | -1,769.47 | 565.05 | 1,769.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9,400.00 | 90.00 | 180.00 | 7,472.00 | -1,869.47 | 565.04 | 1,869.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9,500.00 | 90.00 | 180.00 | 7,472.00 | -1,969.47 | 565.04 | 1,969.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9,600.00 | 90.00 | 180.00 | 7,472.00 | -2,069.47 | 565.04 | 2,069.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9,700.00 | 90.00 | 180.00 | 7,472.00 | -2,169.47 | 565.03 | 2,169.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9,800.00 | 90.00 | 180.00 | 7,472.00 | -2,269.47 | 565.03 | 2,269.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9,900.00 | 90.00 | 180.00 | 7,472.00 | -2,369.47 | 565.03 | 2,369.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10,000.00 | 90.00 | 180.00 | 7,472.00 | -2,469.47 | 565.03 | 2,469.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10,100.00 | 90.00 | 180.00 | 7,472.00 | -2,569.47 | 565.02 | 2,569.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10,200.00 | 90.00 | 180.00 | 7,472.00 | -2,669.47 | 565.02 | 2,669.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10,300.00 | 90.00 | 180.00 | 7,472.00 | -2,769.47 | 565.02 | 2,769.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10,400.00 | 90.00 | 180.00 | 7,472.00 | -2,869.47 | 565.02 | 2,869.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10,500.00 | 90.00 | 180.00 | 7,472.00 | -2,969.47 | 565.01 | 2,969.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10,600.00 | 90.00 | 180.00 | 7,472.00 | -3,069.47 | 565.01 | 3,069.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10,700.00 | 90.00 | 180.00 | 7,472.00 | -3,169.47 | 565.01 | 3,169.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10,800.00 | 90.00 | 180.00 | 7,472.00 | -3,269.47 | 565.01 | 3,269.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10,900.00 | 90.00 | 180.00 | 7,472.00 | -3,369.47 | 565.00 | 3,369.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11,000.00 | 90.00 | 180.00 | 7,472.00 | -3,469.47 | 565.00 | 3,469.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11,100.00 | 90.00 | 180.00 | 7,472.00 | -3,569.47 | 565.00 | 3,569.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11,200.00 | 90.00 | 180.00 | 7,472.00 | -3,669.47 | 565.00 | 3,669.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11,300.00 | 90.00 | 180.00 | 7,472.00 | -3,769.47 | 564.99 | 3,769.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11,400.00 | 90.00 | 180.00 | 7,472.00 | -3,869.47 | 564.99 | 3,869.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11,500.00 | 90.00 | 180.00 | 7,472.00 | -3,969.47 | 564.99 | 3,969.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11,600.00 | 90.00 | 180.00 | 7,472.00 | -4,069.47 | 564.99 | 4,069.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11,700.00 | 90.00 | 180.00 | 7,472.00 | -4,169.47 | 564.98 | 4,169.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11,800.00 | 90.00 | 180.00 | 7,472.00 | -4,269.47 | 564.98 | 4,269.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11,900.00 | 90.00 | 180.00 | 7,472.00 | -4,369.47 | 564.98 | 4,369.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12,000.00 | 90.00 | 180.00 | 7,472.00 | -4,469.47 | 564.98 | 4,469.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12,100.00 | 90.00 | 180.00 | 7,472.00 | -4,569.47 | 564.97 | 4,569.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12,200.00 | 90.00 | 180.00 | 7,472.00 | -4,669.47 | 564.97 | 4,669.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12,300.00 | 90.00 | 180.00 | 7,472.00 | -4,769.47 | 564.97 | 4,769.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12,400.00 | 90.00 | 180.00 | 7,472.00 | -4,869.47 | 564.97 | 4,869.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12,500.00 | 90.00 | 180.00 | 7,472.00 | -4,969.47 | 564.96 | 4,969.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12,600.00 | 90.00 | 180.00 | 7,472.00 | -5,069.47 | 564.96 | 5,069.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12,700.00 | 90.00 | 180.00 | 7,472.00 | -5,169.47 | 564.96 | 5,169.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12,800.00 | 90.00 | 180.00 | 7,472.00 | -5,269.47 | 564.96 | 5,269.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12,900.00 | 90.00 | 180.00 | 7,472.00 | -5,369.47 | 564.95 | 5,369.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13,000.00 | 90.00 | 180.00 | 7,472.00 | -5,469.47 | 564.95 | 5,469.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13,100.00 | 90.00 | 180.00 | 7,472.00 | -5,569.47 | 564.95 | 5,569.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13,200.00 | 90.00 | 180.00 | 7,472.00 | -5,669.47 | 564.95 | 5,669.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13,300.00 | 90.00 | 180.00 | 7,472.00 | -5,769.47 | 564.94 | 5,769.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13,400.00 | 90.00 | 180.00 | 7,472.00 | -5,869.47 | 564.94 | 5,869.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13,500.00 | 90.00 | 180.00 | 7,472.00 | -5,969.47 | 564.94 | 5,969.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13,600.00 | 90.00 | 180.00 | 7,472.00 | -6,069.47 | 564.94 | 6,069.47 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13,608.00 | 90.00 | 180.00 | 7,472.00 | -6,077.47 | 564.93 | 6,077.47 | 0.00 | 0.00 | 0.00 | 0.00 |

TD Well @ 13608.00 ft - Total Depth (Toe) - HUNZIKER 1N-4HZ_BHL

Plan Report for HUNZIKER 1N-4HZ - Rev A0 Permit**Plan Annotations**

| Measured Depth (usft) | Vertical Depth (usft) | Local Coordinates | | Comment |
|-----------------------------|-----------------------------|-------------------|-----------------|-----------------------------|
| | | +N/-S (usft) | +E/-W (usft) | |
| 0.00 | 0.00 | 0.00 | 0.00 | Tie-On to Surface @ 0.00 ft |
| 3,918.00 | 3,918.00 | 0.00 | 0.00 | Begin Nudge @ 3918.00 ft |
| 4,918.00 | 4,897.82 | 75.74 | 155.28 | End Nudge @ 4918.00 ft |
| 5,746.00 | 5,675.88 | 199.88 | 409.81 | Begin Drop @ 5746.00 ft |
| 6,746.00 | 6,655.70 | 275.62 | 565.10 | Set 4.5" Liner @ 6746.00 ft |
| 6,746.00 | 6,655.70 | 275.62 | 565.10 | End Drop @ 6746.00 ft |
| 6,846.11 | 6,755.81 | 275.62 | 565.10 | KOP @ 6846.11 ft |
| 7,200.00 | 7,095.47 | 189.95 | 565.10 | DLS = 8°/100 ft |
| 7,971.11 | 7,472.00 | -440.58 | 565.08 | End Build @ 7971.11 ft |
| 13,608.00 | 7,472.00 | -6,077.47 | 564.93 | TD Well @ 13608.00 ft |

Vertical Section Information

| Angle Type | Target | Azimuth (°) | Origin Type | Origin | | Start TVD (usft) |
|---------------|----------------------|----------------|----------------|-----------------|-----------------|------------------------|
| | | | | +N/_S (usft) | +E/-W (usft) | |
| User | No Target (Freehand) | 180.00 | Slot | 0.00 | 0.00 | 0.00 |

Survey tool program

| From (usft) | To (usft) | Survey/Plan | Survey Tool |
|----------------|--------------|---------------|-------------|
| 0.00 | 7,971.11 | Rev A0 Permit | MWD |
| 7,971.11 | 13,608.00 | Rev A0 Permit | MWD |

Casing Details

| Measured Depth (usft) | Vertical Depth (usft) | Name | Casing Diameter (") | Hole Diameter (") |
|-----------------------------|-----------------------------|--------|---------------------------|-------------------------|
| 1,258.00 | 1,258.00 | 9 5/8" | 9-5/8 | 13-1/2 |
| 7,971.11 | 7,472.00 | 7" | 7 | 8-3/4 |

Formation Details

| Measured Depth (usft) | Vertical Depth (usft) | Name | Lithology | Dip (°) | Dip Direction (°) |
|-----------------------------|-----------------------------|-----------------------|-----------|------------|-------------------------|
| 4,158.28 | 4,158.00 | Parkman | | 0.00 | |
| 4,532.71 | 4,528.00 | Sussex | | 0.00 | |
| 7,490.97 | 7,317.00 | SSPG | | 0.00 | |
| 7,629.36 | 7,392.00 | NBRR | | 0.00 | |
| 7,781.31 | 7,447.00 | N470_B_CK | | 0.00 | |
| 7,971.11 | 7,472.00 | Landing Target (Heel) | | 0.00 | |
| 13,608.00 | 7,472.00 | Total Depth (Toe) | | 0.00 | |

Plan Report for HUNZIKER 1N-4HZ - Rev A0 Permit

Targets associated with this wellbore

| Target Name | TVD (usft) | +N/-S (usft) | +E/-W (usft) | Shape |
|---------------------|---------------|-----------------|-----------------|---------|
| HUNZIKER 1N-4HZ_SEC | 0.00 | 0.00 | 0.00 | Polygon |
| HUNZIKER 1N-4HZ_LD | 0.00 | 0.00 | 0.00 | Polygon |
| HUNZIKER 1N-4HZ_SHL | 0.00 | 0.00 | 0.00 | Point |
| HUNZIKER 1N-4HZ_BHL | 7,472.00 | -6,077.47 | 564.93 | Point |

Directional Difficulty Index

| | | | |
|-------------------------------------|----------------|-------------------------------|------------------------------------|
| Average Dogleg over Survey: | 0.96 °/100usft | Maximum Dogleg over Survey: | 8.00 °/100usft at 7,971.11 usft |
| Net Tortousity applicable to Plans: | 0.96 °/100usft | Directional Difficulty Index: | 6.365 |

Audit Info

North Reference Sheet for Sec. 28-T2N-R67W - HUNZIKER 1N-4HZ - 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' @ 5067.00usft (Drilling Rig). Northing and Easting are relative to HUNZIKER 1N-4HZ
Coordinate System is US State Plane 1983, Colorado Northern Zone using datum North American Datum 1983, ellipsoid GRS 1980
Projection method is Lambert Conformal Conic (2 parallel)
Central Meridian is -105.50°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:40° 47' 0.000 N°
False Easting: 3,000,000.00usft, False Northing: 1,000,000.00usft, Scale Reduction: 0.99996014

Grid Coordinates of Well: 1,281,033.33 usft N, 3,170,070.87 usft E
Geographical Coordinates of Well: 40° 06' 11.62" N, 104° 53' 31.24" W
Grid Convergence at Surface is: 0.39°

Based upon Minimum Curvature type calculations, at a Measured Depth of 13,608.00usft
the Bottom Hole Displacement is 6,103.67usft in the Direction of 174.69° (True).

Magnetic Convergence at surface is: -8.17° (24 September 2014, , BGGM2014)

Magnetic Model: BGGM2014
Date: 24-Sep-14
Declination: 8.56°
Inclination/Dip: 66.67°
Field Strength: 52509

Grid North is 0.39° East of True North (Grid Convergence)
Magnetic North is 8.56° East of True North (Magnetic Declination)
Magnetic North is 8.17° East of Grid North (Magnetic Convergence)

To convert a True Direction to a Grid Direction, Subtract 0.39°
To convert a Magnetic Direction to a True Direction, Add 8.56° East
To convert a Magnetic Direction to a Grid Direction, Add 8.17°