



# Interchange A S22-30-12N

## Directional Survey Report

Start date: 09/25/2019

End date:

**Company Name:** Extraction Oil & Gas  
**Well Name:** Interchange A S22-30-12N  
**Field:** Wattenberg  
**Rig ID:** Ensign #147  
**API/UWI:** 05-014-20765

**State/Prov:** Colorado  
**County:** Broomfield  
**Country:** US  
**Location:** Interchange A  
**Latitude/Longitude:** 39.980521 / -104.992975

**Survey Company:** Atlas Drilling Services  
**Job Number:** 00276EX-CO  
**Proposed Azimuth:** 170.83  
**Declination:** 8.05 **KB:** 28'  
**North Reference:** True

| Svy  | Depth    | Inc   | Azm    | TVD      | NS     | EW     | VS      | CD     | CA     | DLS  | CL     |
|------|----------|-------|--------|----------|--------|--------|---------|--------|--------|------|--------|
| TiIn | 0.00     | 0.00  | 0.00   | 0.00     | 0.00   | 0.00   | 0.00    | 0.00   | 90.00  | 0.00 |        |
| 1    | 123.00   | 0.71  | 298.32 | 123.00   | 0.36   | -0.67  | -0.46   | 0.76   | 298.32 | 0.58 | 123.00 |
| 2    | 215.00   | 1.06  | 295.50 | 214.99   | 1.00   | -1.94  | -1.29   | 2.18   | 297.22 | 0.38 | 92.00  |
| 3    | 307.00   | 0.66  | 306.17 | 306.98   | 1.68   | -3.14  | -2.16   | 3.56   | 298.14 | 0.47 | 92.00  |
| 4    | 396.00   | 0.93  | 55.91  | 395.97   | 2.38   | -2.95  | -2.82   | 3.80   | 308.93 | 1.47 | 89.00  |
| 5    | 486.00   | 2.87  | 55.29  | 485.92   | 4.08   | -0.49  | -4.10   | 4.11   | 353.08 | 2.16 | 90.00  |
| 6    | 575.00   | 5.26  | 42.38  | 574.69   | 8.36   | 4.09   | -7.60   | 9.31   | 26.05  | 2.86 | 89.00  |
| 7    | 665.00   | 6.36  | 40.18  | 664.22   | 15.22  | 10.08  | -13.41  | 18.25  | 33.53  | 1.25 | 90.00  |
| 8    | 754.00   | 7.95  | 42.11  | 752.53   | 23.55  | 17.39  | -20.48  | 29.28  | 36.45  | 1.81 | 89.00  |
| 9    | 844.00   | 10.91 | 39.87  | 841.30   | 34.71  | 27.03  | -29.95  | 43.99  | 37.91  | 3.31 | 90.00  |
| 10   | 933.00   | 14.49 | 39.60  | 928.11   | 49.75  | 39.53  | -42.82  | 63.54  | 38.47  | 4.02 | 89.00  |
| 11   | 1,023.00 | 17.37 | 39.95  | 1,014.65 | 68.73  | 55.34  | -59.04  | 88.24  | 38.84  | 3.20 | 90.00  |
| 12   | 1,112.00 | 18.38 | 39.78  | 1,099.35 | 89.70  | 72.84  | -76.95  | 115.55 | 39.08  | 1.14 | 89.00  |
| 13   | 1,202.00 | 18.87 | 38.50  | 1,184.64 | 112.00 | 90.98  | -96.06  | 144.29 | 39.09  | 0.71 | 90.00  |
| 14   | 1,291.00 | 21.79 | 38.19  | 1,268.08 | 136.25 | 110.16 | -116.95 | 175.21 | 38.96  | 3.28 | 89.00  |
| 15   | 1,380.00 | 24.35 | 35.86  | 1,349.96 | 164.11 | 131.13 | -141.11 | 210.06 | 38.63  | 3.05 | 89.00  |
| 16   | 1,469.00 | 25.28 | 34.84  | 1,430.74 | 194.57 | 152.73 | -167.75 | 247.36 | 38.13  | 1.15 | 89.00  |
| 17   | 1,559.00 | 27.26 | 35.24  | 1,511.44 | 227.18 | 175.60 | -196.29 | 287.14 | 37.70  | 2.21 | 90.00  |
| PTB  | 1,633.00 | 27.26 | 35.24  | 1,577.22 | 254.87 | 195.16 | -220.51 | 321.01 | 37.44  | 0.00 | 74.00  |