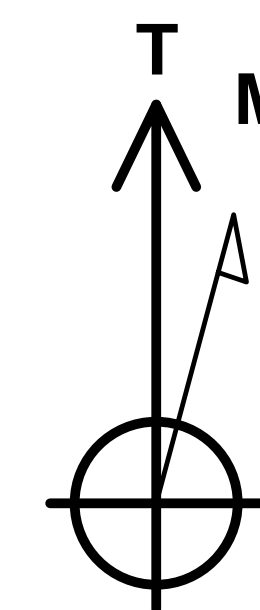




Project: Weld County, CO (NAD83)  
Site: Sec.19-T7N-R65W  
Well: WAAG 12  
Wellbore: Wellbore #1 / Job #1523848  
Design: Plan 1 06-25-15  
Rig: H&P 319



Azimuths to True North  
Magnetic North: 8.32°

Magnetic Field  
Strength: 52651.4snT  
Dip Angle: 67.08°  
Date: 6/25/2015  
Model: HDGM

Map System: US State Plane 1983  
Datum: North American Datum 1983  
Ellipsoid: GRS 1980  
Zone Name: Colorado Northern Zone

Local Origin: Well WAAG 12, True North

Latitude: 40° 33' 40.356 N  
Longitude: 104° 42' 25.092 W

Grid East: 3220338.91  
Grid North: 1448275.07  
Scale Factor: 1.000

Geomagnetic Model: HDGM  
Sample Date: 25-Jun-15  
Magnetic Declination: 8.32°  
Dip Angle from Horizontal: 67.08°  
Magnetic Field Strength: 52651

To convert a Magnetic Direction to a Grid Direction, Add 7.80°  
To convert a Magnetic Direction to a True Direction, Add 8.32° East  
To convert a True Direction to a Grid Direction, Subtract 0.51°

