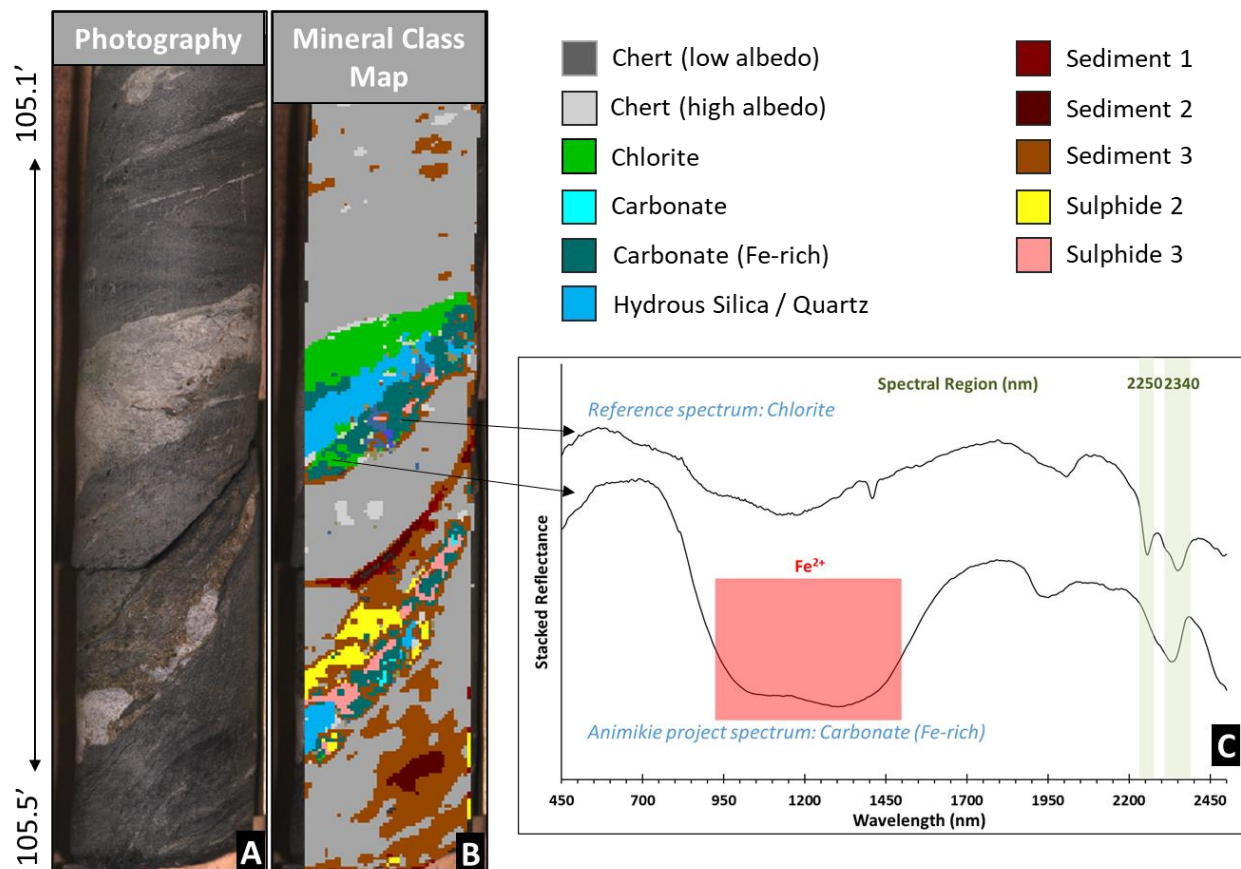


# MnDNR Corescan Project

## Animikie SEDEX Core – Example Results



Photography (A) and mineral class map (B) of DDH K-1. Inset spectra (C) of a typical carbonate (Fe-rich) and chlorite (with trace intermixed carbonate) from the K-1 core.

<p><b>Hyperspectral-detected Mineralogy</b></p>	<p>The Animikie SEDEX core samples in this project consist of interbedded graphitic slate, quartz-phyllite and argillite zones. Moderate pyrite and trace other sulfides (sphalerite) are noted in original drill logs. Many minerals/mineral groups can be identified in the VIS-SWIR range, including phyllosilicates (micas, chlorites), iron oxides, clays (kaolinite and smectite), carbonates, chert, and gypsum. See associated Mineral Key for full list of identified mineralogy with the Corescan HCI-3 system.</p>
<p><b>Results</b></p>	<p>Even though trace sphalerite was noted in original drill logs, a clear sphalerite spectrum was not detected in this study. Variations in the spectral features of iron-rich carbonates do suggest Zn-substitution may occur, but further work would be required to confirm. White micas in general have a relatively narrow range of compositions (based on 2200nm wavelength positions) from Al-rich and Al-poor micas, but negligible Na- and/or Fe-components – consistent with data from the Animikie basin drill core (see above).</p>