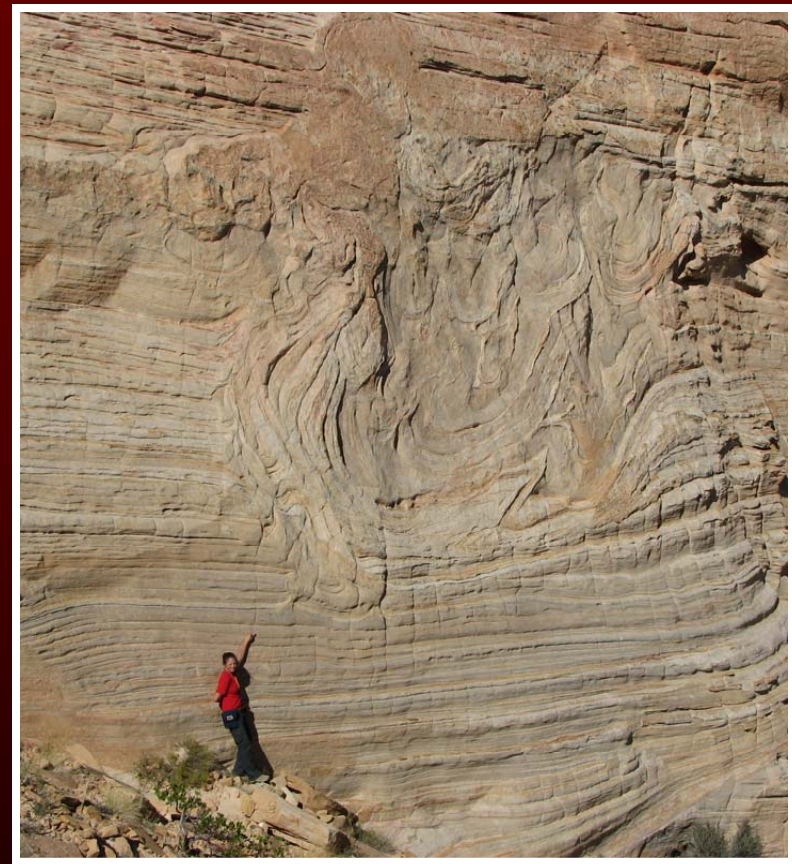
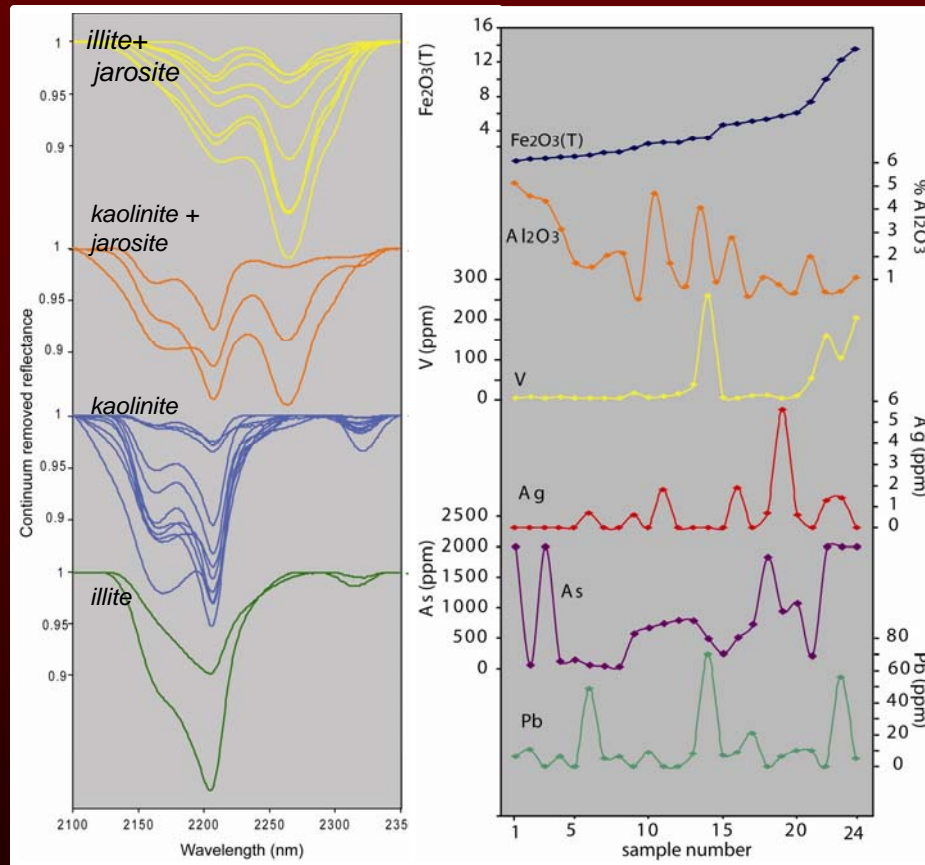


Evaluating the history of eolian and interdune fluid-sediment interactions and mass transfer in an acid and redox influence diagenetic system

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The Jurassic Navajo Sandstone in southern Utah provides an example of an exhumed eolian reservoir that has undergone a complex history of fluid flow. Using a combination of imaging spectroscopy, field mapping, geochemistry, and petrography, we are unraveling the history of multiple phases of fluid-related alteration spanning a range of chemistries at Mollies Nipple, Grand Staircase-Escalante National Monument. The cement mineralogy and geochemistry at this site are anomalous compared to typical Navajo Sandstone diagenesis and include periods of reducing, oxidizing, acidic, and potentially hydrothermal fluids.