An Image Log-based Geometrical and Textural Analysis of a Low-angle Normal Fault System Beneath the FORGE Site near the Mineral Mountains, Utah

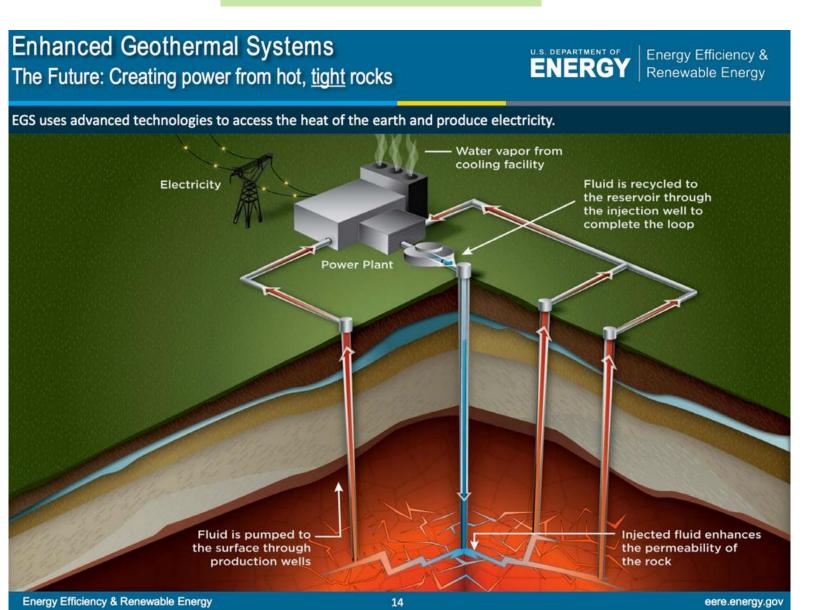
Matthew J. Carter, Ph.D



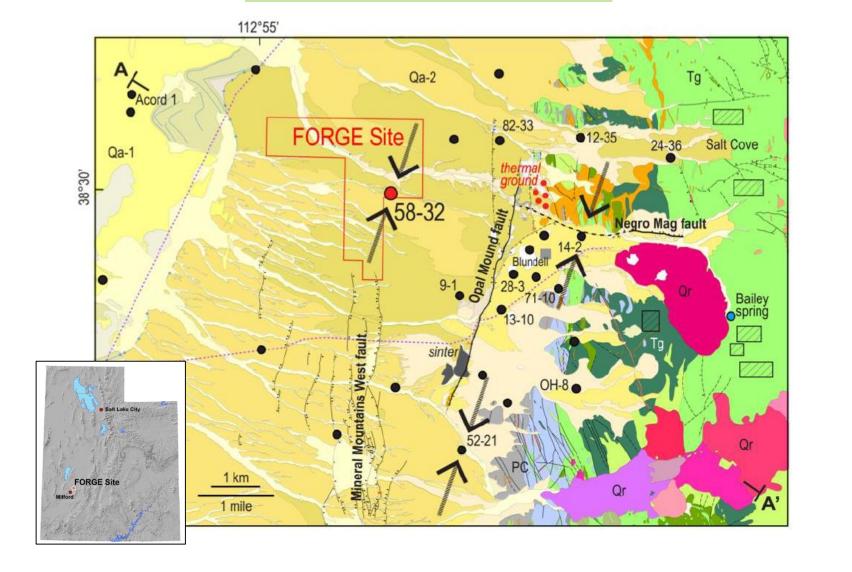


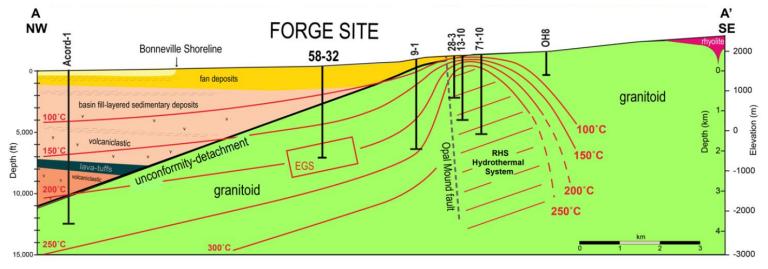
Scan for contact inf

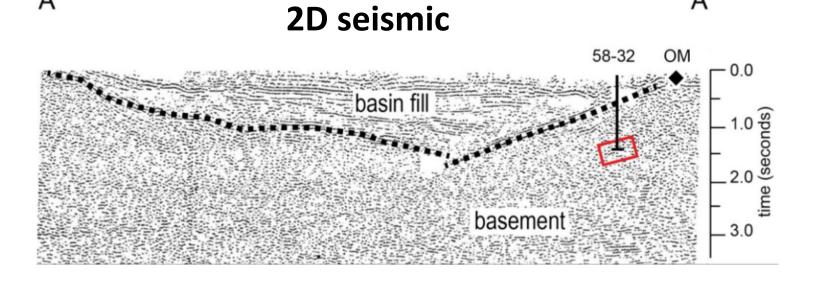
Background

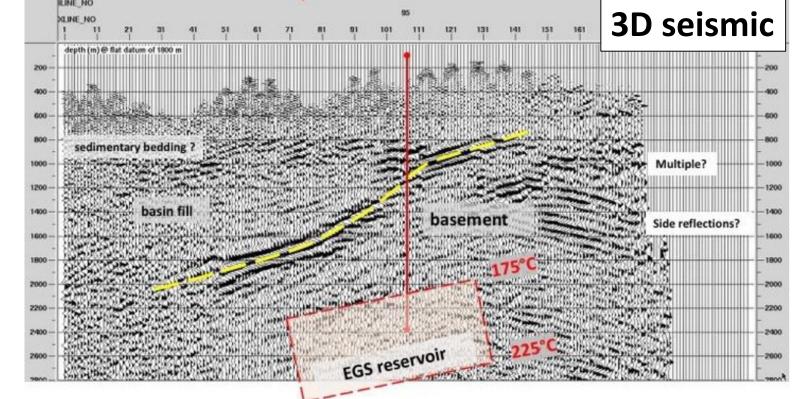


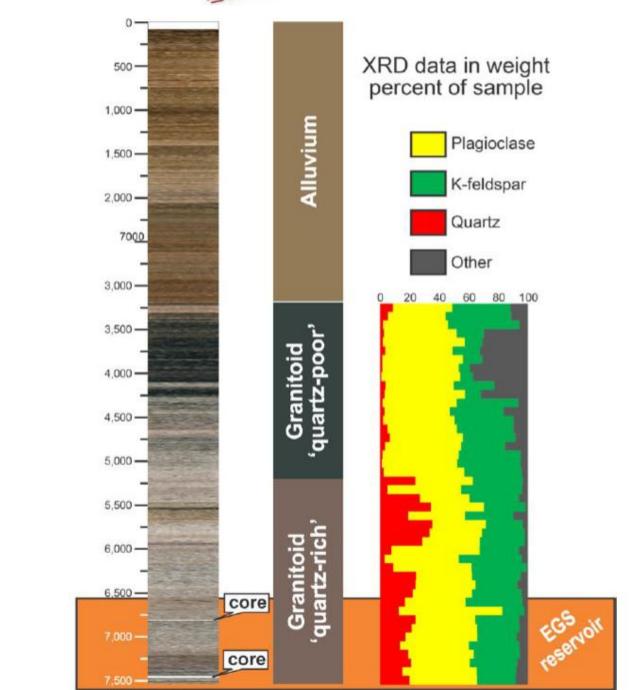
Geologic Setting









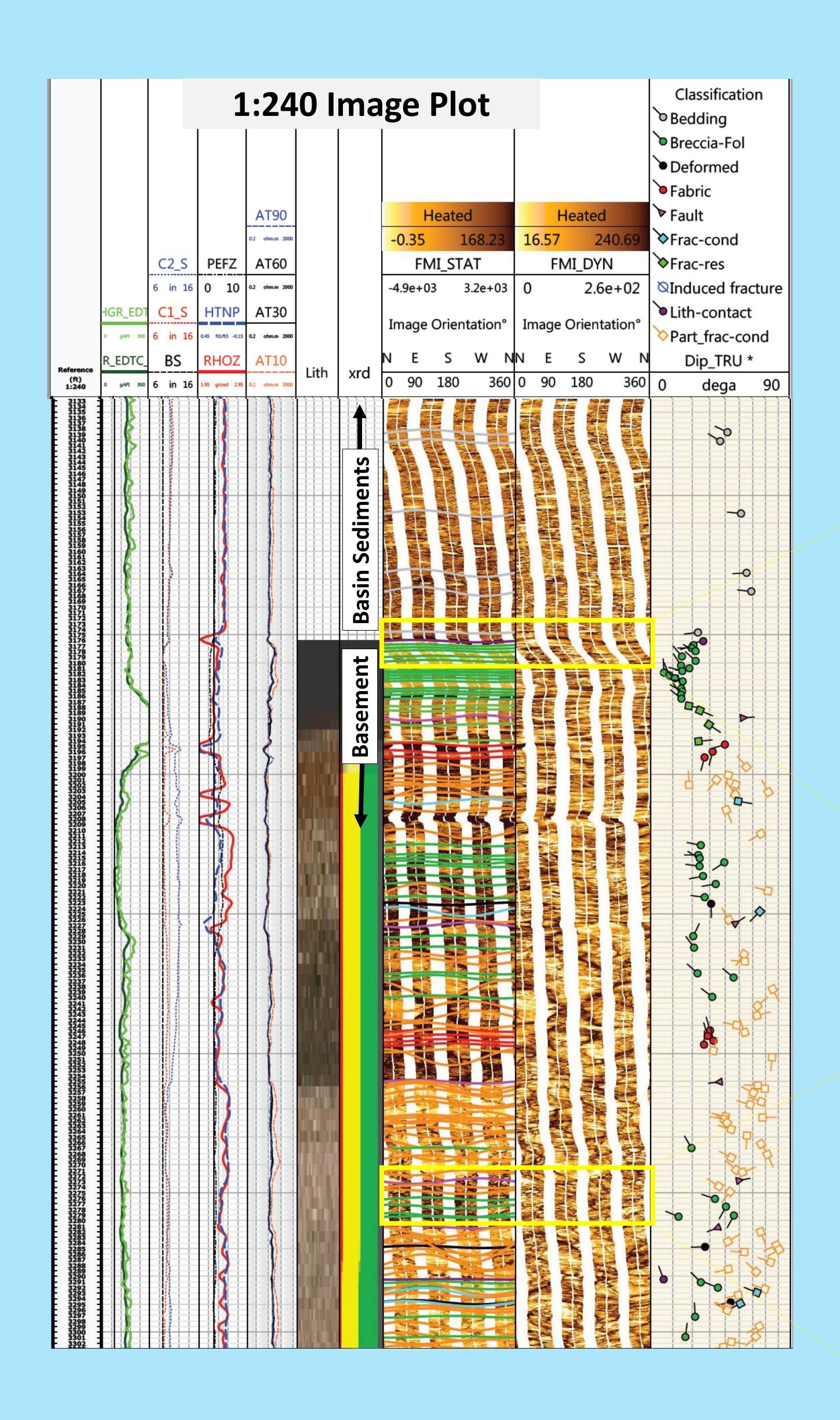


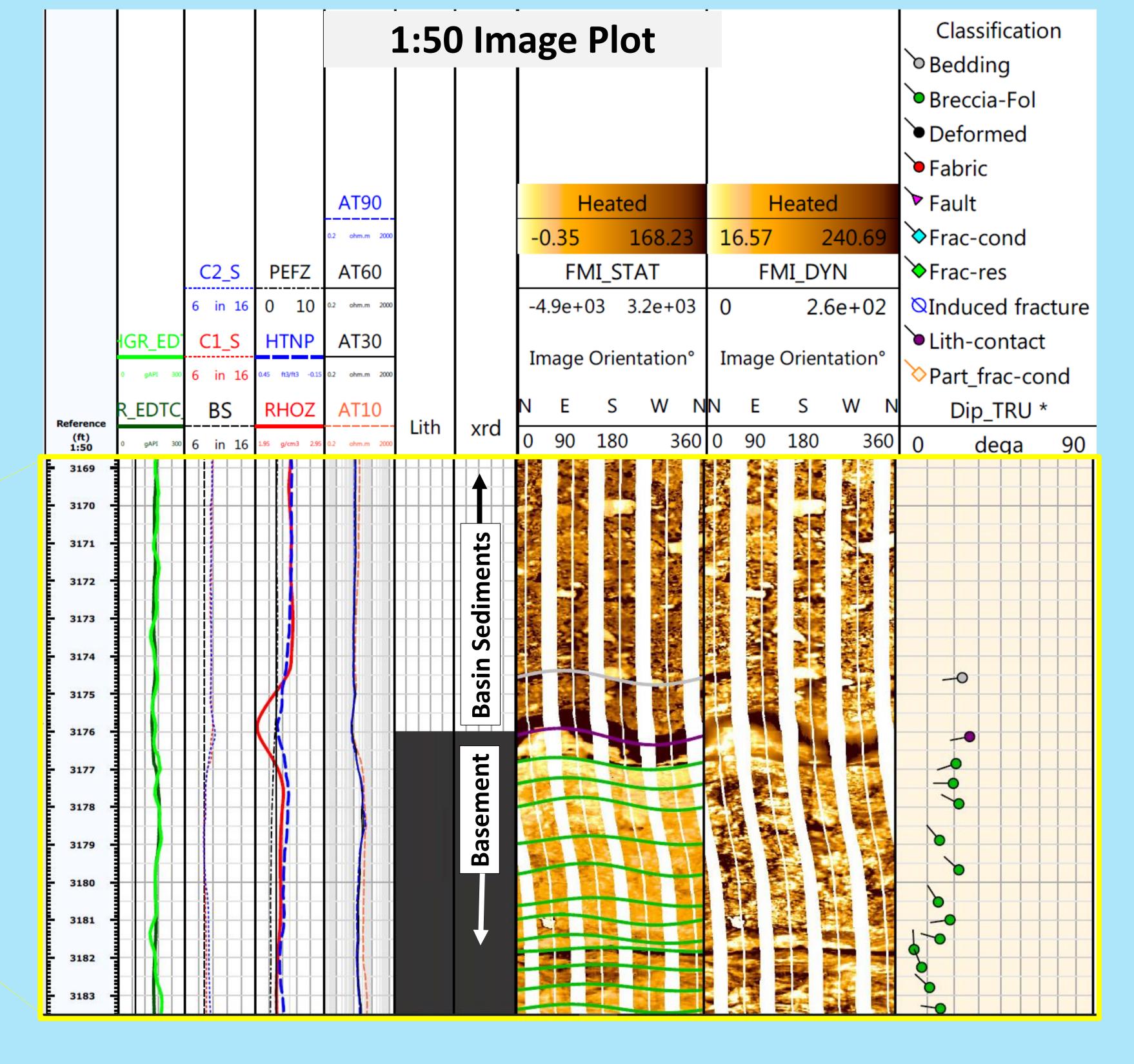
Above figures from:

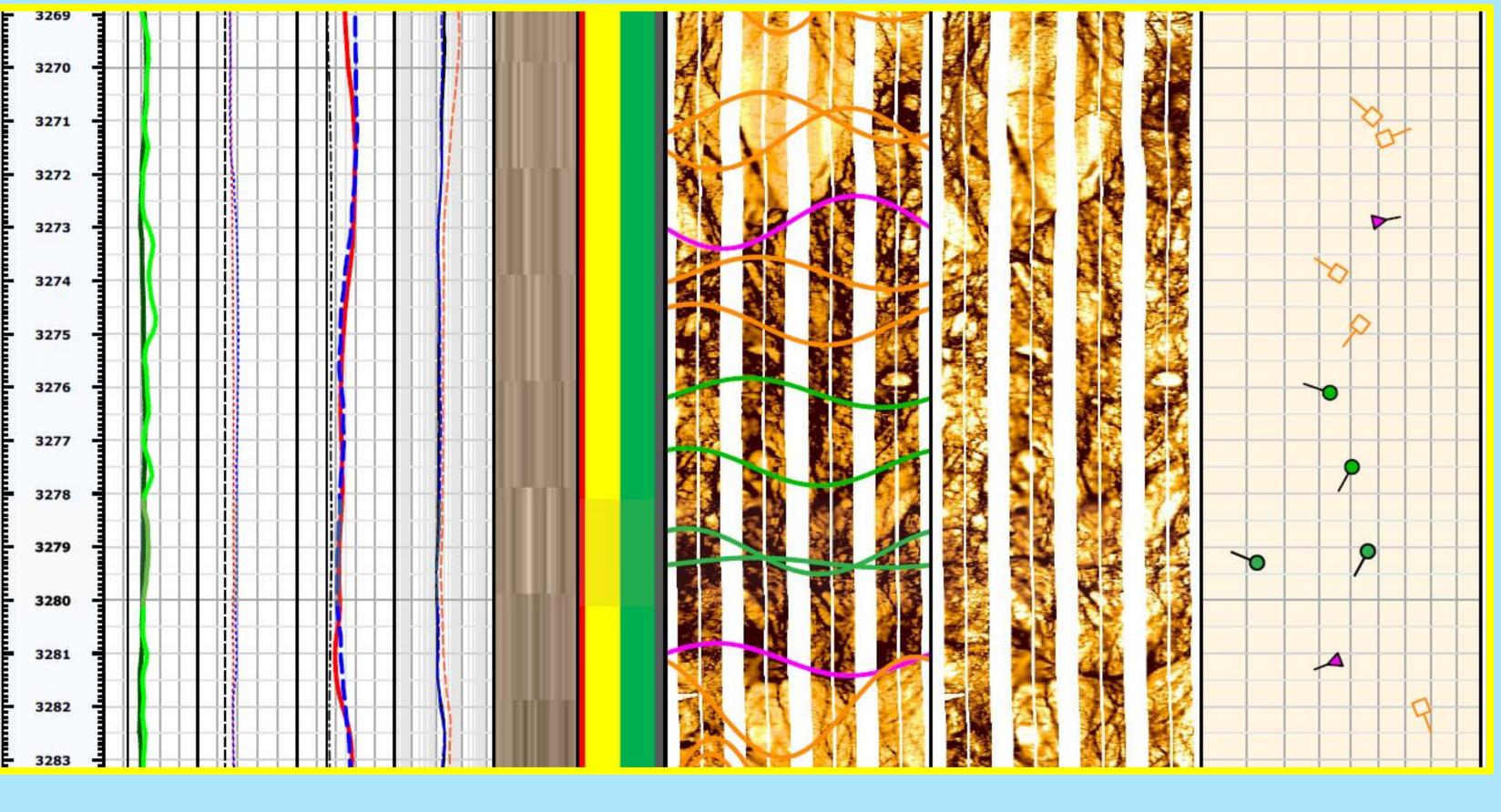


The shallowly W-dipping seismic reflector underneath the FORGE site near the Mineral Mountains, UT is a fault zone characterized by a heavily fractured interval and several 2-12 ft thick cataclastic zones mostly over 3150-3850 ft MD.

There is **no obvious evidence of a strongly foliated, W-dipping shear zone** down to 7545 ft MD







Results

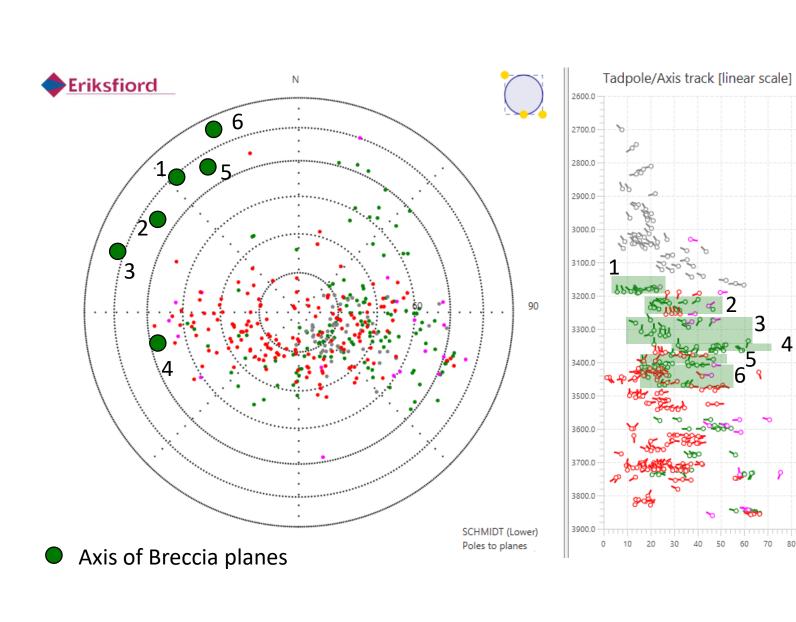
Stereonets of poles to dip types (see image log key for colors)

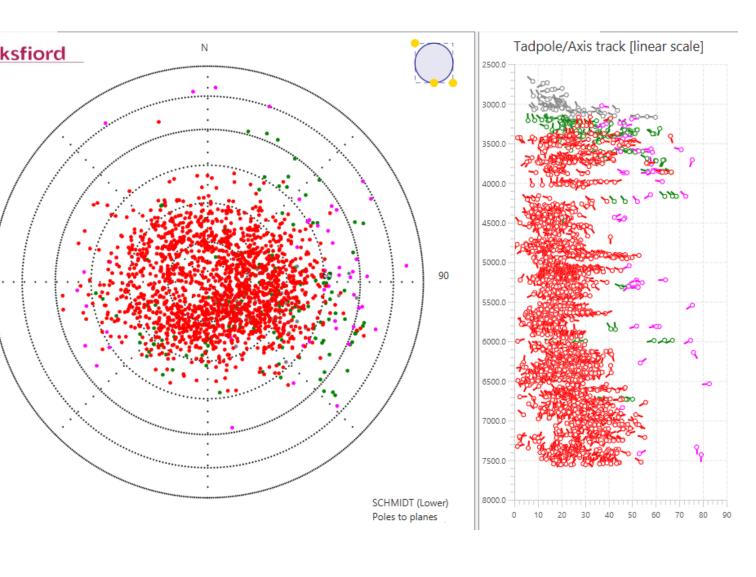
Friksfiord

Mean fracture orientation

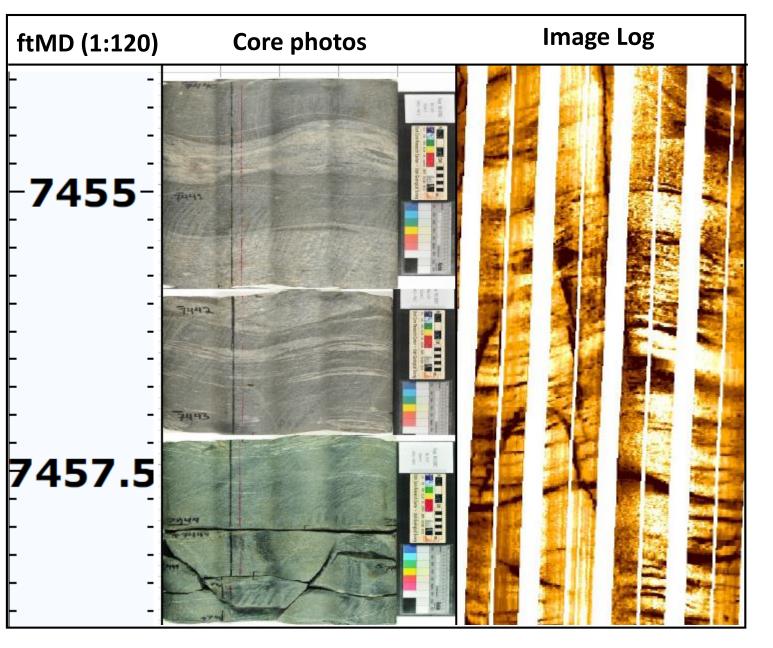
Mean fault orientation

Peter is place.

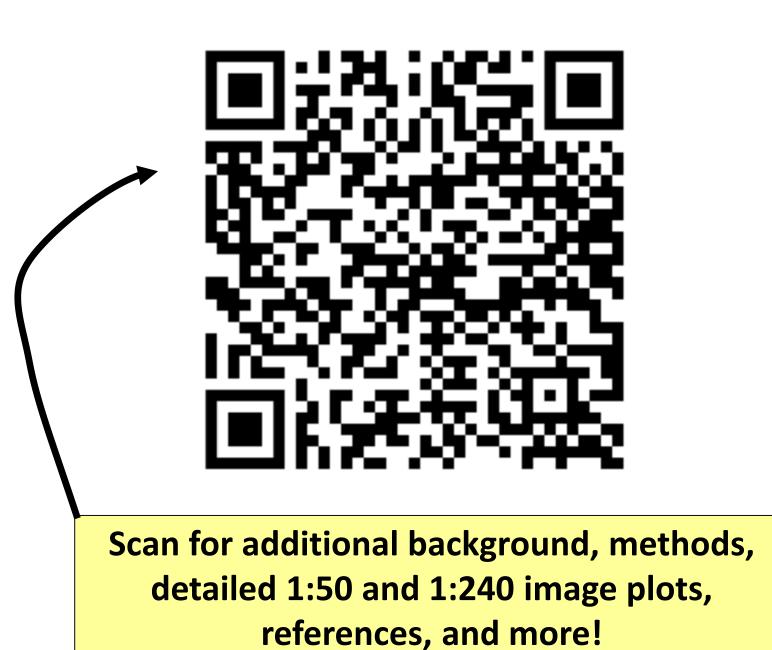




Future Work



Correlate image textures, petrophysical response, and core photos to define a set of lithofacies. Identify relationships between fracturing, faulting, and basement lithology to develop a model for low-angle fault development and igneous petrogenesis for the region



Poster design inspired by Mike Morrison (Michigan State)