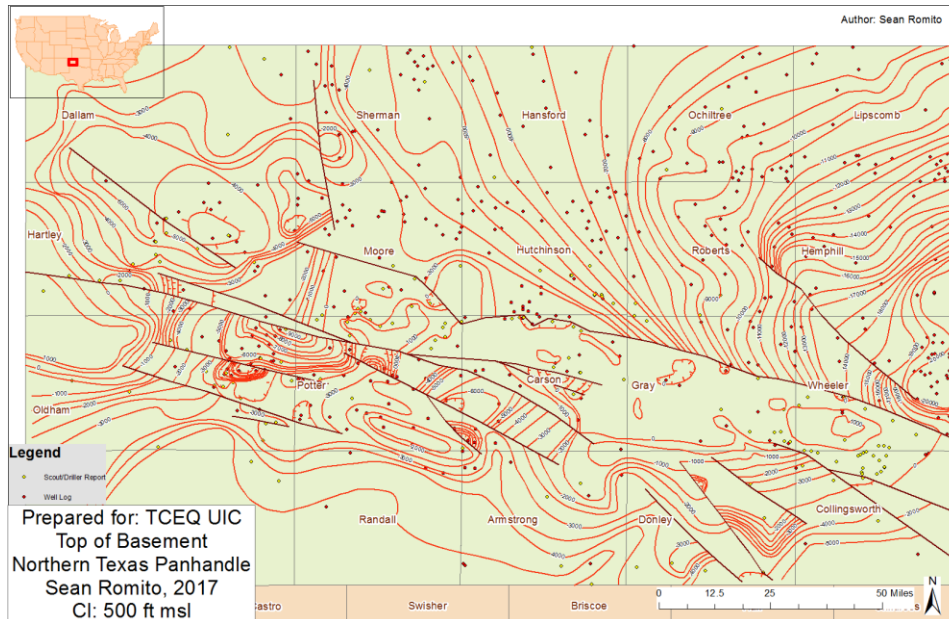


2017 UIC Mickey Leland Intern: Geologic Mapping Project



This summer, the Underground Injection Control (UIC) Permits Section Mickey Leland intern developed a geologic structure map of the top of the basement rocks in the northern Texas panhandle. This is a region covering 20 counties and an area of about 20,000 square miles. The intern developed the map using well logs from the TCEQ and the Groundwater Advisory Group of the Texas Railroad Commission, scout cards, drillers logs, and information from the University of Texas Bureau of Economic Geology. The maps will enable UIC staff to better evaluate applications for deep Class I injection well permits and renewals within the panhandle area relating to seismicity potential.

The maps will provide UIC staff better information on the depth to basement from the base of an injection zone. Knowing the thickness of sediments from the base of the injection zone to the top of the basement is important to UIC staff in evaluating whether pressure increases or injected fluids could travel, or might have traveled downward to the basement, where faults with seismic potential may be located. If this separation is thousands of feet, there is less of a chance the increased pressure or fluids could reach the basement. The intern presented this work at the Groundwater Protection Council's Annual Forum in Boston in September 2017 and was awarded Second Place in the Student Poster Session.