

The purpose of this project is to describe the lithology and interpret the origin of hand samples collected in and around the El Kasr structure (23.858521N, 32.490626E), a synclinal fold located in the Western Desert of Egypt. The problem addressed by this project is that the descriptions of the Garra Limestone, the mapped rock unit for the field area, do not adequately describe the variation seen in the sedimentary rock samples found at the El Kasr structure. Namely, the El Kasr structure contains more clastic units than the literature suggests. The hypothesis for this project is that carbonate units present at El Kasr match descriptions for the carbonate facies of the Garra Limestone. The characteristics of the clastic rock units do not match the description of the Garra Formation, but it is predicted that they will possibly be found in units stratigraphically above and below the Garra Formation, such as the Kurkur and Kiseiba Formations. Historically, there have been problems in the stratigraphic nomenclature of Egypt. This is the result of several different groups of geologists naming rock units based on different characteristics; after these units had been named and divided in different studies, confusion arose when these names were used interchangeably. My goal of point counting the thin sections of these samples is to obtain accurate QFL ratios to properly identify their rock types. After identification of the samples is complete, they will be compared to the literature and the differences will be described. Identifying and describing the lithology and fossils present in these samples may also provide insight into the timing of this fold's development, which is unknown. However, the overall goal will be to provide other workers on the NSF-funded Desert Eyes project with possible origins of these understudied clastic rock units.