In the modern world, there is an increasing demand for lithium and the 17 rare earth elements to create technology; the United States needs to increase its production of these materials to meet future demands and to compete with foreign competitors. Lithium is important because it is needed for the production of batteries, computers and various technological and chemical purposes. This study aims to assess the viability of the Mercer Formation at three sites in Clearfield County, Pennsylvania as a viable source of lithium. A chemostratigraphic characterization of the Mercer Formation at both sites is necessary to understand the chemistry of the clay in the region. Based on previous research, I predict that all three sites will report lithium concentrations as high as 1000 ppm.

Lithium is a critical element. The current global supply of lithium is not sufficient to meet the future demands. If the United States is to become a major exporter of lithium, additional sources of lithium must be discovered.

The usability of the Mercer Formation as an economic resource will ultimately depend on the thicknesses of economically viable layers in specific areas, the accessibility of these layers, and the geographic size of the viable areas. Additional Pennsylvania clay deposits should be studied for lithium concentration in the search for a viable resource.

Acknowledgements & Sources


