

#### 18.4 **The Center for Oil Shale Technology and Research (COSTAR) at the Colorado School of Mines**

Jeremy Boak

*Colorado School of Mines, Golden, CO, United States*

Colorado School of Mines (CSM) has initiated the Center for Oil Shale Technology and Research (COSTAR) to integrate efforts in scientific and engineering research, as well as information management, technical review, education, and communication related to development and production of hydrocarbons from oil shale. There are two major research objectives: help develop oil shale resources to enhance global energy supplies, and minimize the environmental consequences of developing oil shale. The initial motivation for the Center came from the presence of world-leading oil shale resources in the Green River Formation, which will provide clear energy security benefits for Colorado and the United States. Interest in oil shale resources is also growing rapidly throughout world, and the Center will be well positioned for scientific leadership in research supporting development. COSTAR will be headquartered at CSM, as part of the Colorado Energy Research Institute (CERI), and will engage research affiliates at the University of Wisconsin, Binghamton University, the National Center for Atmospheric Research (NCAR) in Boulder, CO, and will benefit from the presence of the U. S. Geological Survey (USGS) in Lakewood, CO. Initial research projects at COSTAR will include:

1. *Geomechanical Behavior of Oil Shale* – including work defining the physical properties of oil shale as well as the fracturing behavior of the rock especially at elevated temperatures for resource characterization and in situ process evaluation.
2. *Geologic Controls on Oil Shale Properties* – geologic, stratigraphic, petrologic and climatologic evaluation of the oil shale to provide the underlying framework for resource characterization and general geologic understanding
3. *Geochemical Properties and Analytical Methods for Oil Shale Production* – evaluation of options for standard assay of oil shale and research on organic geochemistry of oil shale
4. *Oil Shale Information Center* – development of a global geographically referenced database of oil shale information and research support and analysis for the data.