

15.2 **Oil Shale Sourced CO₂ Sequestration Options in the Uinta & Piceance Basins – Utah and Colorado**

Marty Gottlob, [Kevin Beacom](#), Debra Gomez

SI-International, Inc, Denver, Colorado, United States

The Uinta and Piceance Basins of Utah and Colorado contain, within the Tertiary age Green River Formation, an estimated 1.5 trillion barrels of kerogen oil in the form of oil shale. The surface retorting of oil shale produces a significant amount of carbon dioxide (CO₂). SI International conducted preliminary investigations that characterize and assess the viability of geologic sequestration of the CO₂, in the Uinta and Piceance Basins, with emphasis on the White River Mine area of the Uinta Basin. SI International has compiled a large database from existing well data covering approximately 23,000 wells in the Uinta and Piceance Basins. From these data, SI has prepared a suite of maps that identify basin-wide geologic formations most suitable for CO₂ sequestration. A particular area of interest in proximity to an anticipated oil shale mining and retort site on public lands has been chosen here to demonstrate the mapping and reservoir characterization needed to develop a working geologic model. This work is offered as a guide for application to other geologic formations for future geosequestration projects relating to oil shale development and other CO₂ emitting industries such as thermoelectric power plants, refineries, etc. in the Uinta and Piceance Basins.