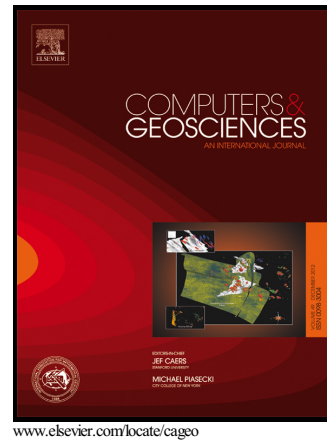


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GIS-based Geospatial Infrastructure of Water Resource Assessment for Supporting Oil Shale Development in Piceance Basin of Northwestern Colorado

Wei Zhou^{a, 1}, Matthew D. Minnick^a, Earl D. Mattson^c, Mengistu Geza^b, Kyle E. Murray^d

^{a,1} Department of Geology and Geological Engineering, Colorado School of Mines, 1516 Illinois Street, Golden, CO 80401, USA, Email: wzhou@mines.edu; Phone: 303-384-2181; Fax: 303-273-3859

^b Department of Civil and Environmental Engineering, Colorado School of Mines, 1500 Illinois Street, Golden, CO 80401, USA

^c Energy Recovery and Sustainability Department, Idaho National Laboratory, P.O. Box 1625, Idaho Falls, ID 83415, USA

^d Oklahoma Geological Survey, University of Oklahoma, 100 E. Boyd, Norman, OK 73019, USA

Abstract

Oil shale deposits of the Green River Formation (GRF) in Northwestern Colorado, Southwestern Wyoming, and Northeastern Utah may become one of the first oil shale deposits to be developed in the U.S. because of their richness, accessibility, and extensive prior characterization. Oil shale is an organic-rich fine-grained sedimentary rock that contains significant amounts of kerogen from which liquid hydrocarbons can be produced. Water is needed to retort or extract oil shale at an approximate rate of three volumes of water for every volume of oil produced. Concerns have been raised over the demand and availability of water to produce oil shale, particularly in semiarid regions where water consumption must be limited and

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