

Optimizing Liquids- and Gas-Fracturing for the Recovery of Coalbed Methane and Shale Gas

Prof. Derek Elsworth

Departments of Energy and Mineral Engineering and Geosciences, G3 Center and EMS Energy Institute, Pennsylvania State University, University Park, USA

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Dr. Derek Elsworth, Professor, Pennsylvania State University, will speak on Thursday, June 10, 2021 at 9:00 a.m. Central Time.

The topic is “Optimizing Liquids- and Gas-Fracturing for the Recovery of Coalbed Methane and Shale Gas.”

Abstract

Developing pervasive fracture permeability in reservoirs is a key need in the recovery of energy and fuels from the subsurface. We explore key controls on fluids-driven shearing and fracturing in the subsurface, in particular the use of liquids and gases to both drive fracturing, transport proppants and to examine the resulting improvement in the transmission characteristics of the resulting fractures.

Biography

Derek Elsworth is a Professor in the Departments of Energy and Mineral Engineering and of Geosciences and the Center for Geomechanics, Geofluids, and Geohazards at Penn State. His interests are in the areas of computational mechanics, rock mechanics, and in the mechanical and transport characteristics of fractured rocks, with application to geothermal energy, the deep geological sequestration of radioactive wastes and of CO₂, unconventional hydrocarbons including coal-gas, tight-gas-shales and hydrates.