

**Solid Earth Research; Reports Outline Solid Earth Research Study Findings from University of Texas (Upscaling pore pressure-dependent gas permeability in shales)**

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2017 JUN 16 (NewsRx) -- By a News Reporter-Staff News Editor at Science Letter -- Fresh data on Solid Earth Research are presented in a new report. According to news reporting originating in Austin, Texas, by NewsRx journalists, research stated, "Upscaling pore pressure dependence of shale gas permeability is of great importance and interest in the investigation of gas production in unconventional reservoirs. In this study, we apply the Effective Medium Approximation, an upscaling technique from statistical physics, and modify the Doyen model for unconventional rocks."

Financial supporters for this research include NanoGeosciences Laboratory, Mudrock System Research Laboratory (MSRL), Bureau of Economic Geology (BEG).

The news reporters obtained a quote from the research from the University of Texas, "We develop an upscaling model to estimate the pore pressure-dependent gas permeability from pore throat size distribution, pore connectivity, tortuosity, porosity, and gas characteristics. We compare our adapted model with six data sets: three experiments, one pore-network model, and two lattice-Boltzmann simulations."

According to the news reporters, the research concluded: "Results showed that the proposed model estimated the gas permeability within a factor of 3 of the measurements/simulations in all data sets except the Eagle Ford experiment for which we discuss plausible sources of discrepancies."

For more information on this research see: Upscaling pore pressure-dependent gas permeability in shales. Journal of Geophysical Research-Solid Earth, 2017;122(4):2541-2552. Journal of Geophysical Research-Solid Earth can be contacted at: Amer Geophysical Union, 2000 Florida Ave NW, Washington, DC 20009, USA.

Our news correspondents report that additional information may be obtained by contacting B. Ghanbarian, Univ Texas Austin, Dept. of Petr & Geosyst Engr, Austin, TX 78712, United States.

Keywords for this news article include: Austin, Texas, United States, North and Central America, Solid Earth Research, University of Texas.

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