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1. *Studies from University of Texas Austin Update Current Data on Networks (Assessment of Co2 Storage Potential In Reservoirs With Residual Gas Using Deep Learning)*

Client/Matter: -None-

Search Terms: "Bureau of Economic Geology"

Search Type: Natural Language

Narrowed by:

Content Type	Narrowed by
News	Timeline: Mar 01, 2023 to Mar 31, 2023

Studies from University of Texas Austin Update Current Data on Networks (Assessment of Co2 Storage Potential In Reservoirs With Residual Gas Using Deep Learning)

Network Daily News

March 16, 2023 Thursday

Section: NETWORKS

Length: 589 words

Body

2023 MAR 16 (NewsRx) -- By a News Reporter-Staff News Editor at Network Daily News -- Fresh data on Networks are presented in a new report. According to news reporting from Austin, Texas, by NewsRx journalists, research stated, "CO2 injection into the underlying water leg of depleted hydrocarbon reservoirs is a desirable option for carbon storage as demonstrated by existing industrial-scale storage projects in these geologic environments. This study sheds light on the effect of residual methane on the CO2 storage efficiency as a screening criterion for selecting a water-bearing zone of a depleted gas reservoir to store CO2."

Financial supporters for this research include Gulf Coast Carbon Center, ***Bureau of Economic Geology*** (BEG), Jackson School of Geosciences, University of Texas at Austin.

The news correspondents obtained a quote from the research from the University of Texas Austin, "Using compositional reservoir simulations, we have evaluated the impact of residual methane on the injectivity, operational pressure, and long-term CO2 trapping efficiency during injection and postinjection stage in a reservoir model representative of the so-called 'HC sand' gas reservoir in the High Island 24L field located in the offshore Texas State Waters. Results suggest that the presence of residual hydrocarbon gas negatively affects CO2 residual and dissolution trapping because it enhances the injectivity and pressure management arising from the increased mobility of CO2 plume in the vicinity of the injection zone due to its mixing with the resident residual hydrocarbon gas. We further investigate the application of artificial neural network (ANN)-based proxy models for fast-track modeling of CO2 storage in geologic structures associated with depleted gas reservoirs, aiming at the prediction of CO2 trapping efficiency. We then use the developed ANN model to perform Monte Carlo simulations for quantifying the uncertainty of geologic and reservoir parameters on CO2 trapping efficiency in these formations. It becomes evident that the residual hydrocarbon saturation is a key screening criterion for the storage site selection."

According to the news reporters, the research concluded: "The developed data-driven model can offer a robust and fast tool for screening the water-bearing zone of the depleted gas reservoirs by evaluating the efficiency of CO2 storage."

This research has been peer-reviewed.

For more information on this research see: Assessment of Co2 Storage Potential In Reservoirs With Residual Gas Using Deep Learning. Interpretation, 2022;10(3). Interpretation can be contacted at: Soc Exploration Geophysicists, 8801 S Yale St, Tulsa, OK 74137, USA.

Our news journalists report that additional information may be obtained by contacting Sahar Bakhshian, University of Texas Austin, Jackson School of Geosciences, Bur Econ Geol, Austin, TX 78712, United States. Additional authors for this research include Ali Shariat and Arshad Raza.

The direct object identifier (DOI) for that additional information is: https://doi.org/10.1190/INT-2021-0147.1. This DOI is a link to an online electronic document that is either free or for purchase, and can be your direct source for a journal article and its citation.

Keywords for this news article include: Austin, Texas, United States, North and Central America, Networks, Hydrocarbons, Organic Chemicals, University of Texas Austin.

Classification

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Document-Type: Expanded Reporting

Publication-Type: Newsletter

Subject: CARBON CAPTURE & STORAGE (90%); COLLEGES & UNIVERSITIES (90%); EXPERIMENTATION & RESEARCH (90%); GEOLOGY & GEOPHYSICS (90%); JOURNALISM (90%); NEWS REPORTING (90%); WRITERS (89%); NEURAL NETWORKS (76%); PHYSICS (72%); Austin;State:Texas;United States;North and Central America;Networks;Hydrocarbons;Organic Chemicals (%)

Organization: UNIVERSITY OF TEXAS (93%)

Industry: COLLEGES & UNIVERSITIES (90%); METHANE (90%); NEWS REPORTING (90%); NATURAL GAS (89%); WRITERS (89%); NEURAL NETWORKS (76%)

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