Science - Applied Sciences; Studies from University of Texas Austin Reveal New Findings on Applied Sciences (High-Resolution Mapping of Subsurface Sedimentary Facies and Reservoirs Using Seismic Sedimentology)

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2025 JUL 11 (NewsRx) -- By a News Reporter-Staff News Editor at Science Letter -- Fresh data on applied sciences are presented in a new report. According to news reporting from Austin, Texas, by NewsRx journalists, research stated, "This investigation presents the current status of seismic sedimentology, along with seismic geomorphology, as applied to the high-resolution (<5 m) mapping of sedimentary facies and hydrocarbon reservoirs in the subsurface."

The news correspondents obtained a quote from the research from University of Texas Austin: "Seismic sedimentology involves the joint investigation of seismic lithology and seismic geomorphology. The high-resolution (as thin as one meter) interpretation of depositional units on lithofacies and paleo-landforms can be achieved by following a comprehensive workflow focusing on three mandatory steps (evaluating and improving data quality; selecting right attributes, preferably 90° seismic trace with frequency fusion; and making use of horizontal resolution on stratal slices) and two optional steps (guiding interpretation with seismic models and applying machine learning techniques). Seismic sedimentology is set to improve through enhanced calibration using well and outcrop data, along with regional and local geological models."

According to the news reporters, the research concluded: "Furthermore, there will be a deeper integration between geological and geophysical disciplines, as well as advancements in high-resolution geophysical acquisition and processing techniques."

For more information on this research see: High-Resolution Mapping of Subsurface Sedimentary Facies and Reservoirs Using Seismic Sedimentology. Applied Sciences, 2025,15(12):6387. (Applied Sciences - http://www.mdpi.com/journal/applsci). The publisher for Applied Sciences is MDPI AG.

A free version of this journal article is available at https://doi.org/10.3390/app15126387.

Our news editors report that more information may be obtained by contacting Hongliu Zeng, **Bureau of Economic Geology**, Jackson School of Geosciences, University of Texas Austin, Austin, TX 78750, United States.

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