Subsurface Research; Researchers from University of Texas Austin Provide Details of New Studies and Findings in the Area of Subsurface Research (Seismic Chronostratigraphy At Reservoir Scale: Lessons From a Realistic Seismic Modeling of Mixed Clastic-carbonate ...)

2020 MAR 20 (NewsRx) -- By a News Reporter-Staff News Editor at Science Letter -- Investigators publish new report on Subsurface Research. According to news reporting originating in Austin, Texas, by NewsRx journalists, research stated, "We tested the validity of tracking seismic events as representations of chronostratigraphic surfaces at the subseismic, high-frequency-cycle level. A high-resolution geocellular model was generated from approximately 400 m of mixed clastic-carbonate sequences in the San Andres and Grayburg Formations in the Permian Basin, with 0.3-0.6 m layering and minimal upscaling."

Funders for this research include Reservoir Characterization Research Laboratory (RCRL) at the ==Bureau of Economic Geology== of the University of Texas at Austin, Occidental Petroleum.

The news reporters obtained a quote from the research from the University of Texas Austin, "Realistic stratigraphic framework, facies, and velocity volumes were created by geostatistically mapping data from outcrop and subsurface sources while honoring state-of-theart principles of stratigraphic and sedimentary analyses. Using the synthetic seismic data of different frequencies, the potential and pitfalls of using autotracked seismic horizons in building high-resolution reservoir models were tested. At the reservoir (meter) scale, the seismic reflections from flatter and thicker sediments with less facies and velocity heterogeneities tend to follow geologic-time surfaces; on the contrary, reflections from where thin sediments dip against flat strata with more facies and velocity heterogeneities tend to follow lithostratigraphy. For the latter seismic-guided reservoir modeling is not very precise, even with data as high as 140 Hz frequency."

According to the news reporters, the research concluded: "Therefore, for seismic-assisted reservoir prediction and modeling, the interpretation of seismic events is useful, but well calibration is critical."

For more information on this research see: Seismic Chronostratigraphy At Reservoir Scale: Lessons From a Realistic Seismic Modeling of Mixed Clastic-carbonate Strata In the Permian Basin, West Texas and New Mexico, Usa. Interpretation, 2020;8(1):T13-T25. Interpretation can be contacted at: Soc Exploration Geophysicists, 8801 S Yale St, Tulsa, OK 74137, USA.

Our news correspondents report that additional information may be obtained by contacting H.L. Zeng, University of Texas Austin, Bur Econ Geol, Jackson School of Geosciences, Austin, TX 78712, United States. Additional authors for this research include C. Kerans, X. Janson and Y.W. He.

Keywords for this news article include: Austin, Texas, United States, North and Central America, Subsurface Research, Alkalies, Anions, Carbonates, Carbonic Acid, University of Texas Austin.

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