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ON COVER – Outcrop of Cretaceous Yacoraite Formation carbonates (tan color), under and overlain by red fluvial sandstones of the Pirgua and Santa Barbara Groups respectively, Salta area, Argentina. The Yacoraite Formation is interpreted to be lacustrine in origin and is one of several outcrop analogs to the prolific South Atlantic pre-salt reservoirs being examined by the ExxonMobil Lacustrine Carbonate Collaborative. Process-based modeling of diagenesis and reservoir quality is another component of the Lacustrine Carbonate Collaborative project. See related article by Jones and Xiao on p. 1249 of this issue of the *Bulletin*. Photograph by Timothy Demko (ExxonMobil).

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E&P NOTE

Seismic geomorphological analysis and hydrocarbon potential of the Lower Cretaceous Cromer Knoll Group, Heidrun field, Norway
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The role of fluid pressure and diagenetic cements for porosity preservation in Triassic fluvial reservoirs of the Central Graben, North Sea
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Mechanisms of shale gas storage: Implications for shale gas exploration in China
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Accommodation-based coal cycles and significant surface correlation of low-accommodation Lower Cretaceous coal seams, Lloydminster heavy oil field, Alberta, Canada: Implications for coal quality distribution
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Variable gas content, saturation, and accumulation characteristics of Weibei coalbed methane pilot-production field in the southeastern Ordos Basin, China
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PREVIEWS

Finding new petroleum in Norway

Jurassic petroleum of the Norwegian continental shelf and North Sea is reaching the limits of exploration, and the Cretaceous is being considered for investigation. The discovery of the Agat field confirms the existence of a working petroleum system capable of charging Cretaceous reservoirs. 1227

Reservoir quality in lacustrine carbonates

Reservoir quality in lacustrine South Atlantic rift carbonates is affected by geothermal convection driven by temperature differences in lake waters. Geothermal gradients are enhanced by high-permeability features such as faults, fractures, and continuous dissolution zones with exposure. 1249

Predicting the presence of porosity

Improved understanding of sandstone diagenesis in the Skagerrak Formation, Central Graben, North Sea, will help predict whether high porosity facies will be found at depths greater than 3,200 m, where hydrocarbons are currently being produced. 1273

A shallow model based on borehole data

An integrated three-dimensional model of the shallow geology and of the shallow seismic velocity field is developed using publicly available borehole data. A new and more iterative workflow is presented that results in a robust geological model in the Chémery area, Paris Basin, France. 1303

Shale gas in China

The purpose of this paper is to discuss the mechanisms of shale gas storage and risks associated with free gas loss for exploration in marine organic-rich shales in China. The cost of shale gas exploration and production is higher than in the United States, and a good understanding of risk is essential. 1325

A low-accommodation coal study

This study identifies wetting- and drying-upward coal cycles in low accommodation coal seams and uses coal cycles to correlate coal deposition. A depositional model based on coal cycle correlations can provide coal quality prediction for CBM exploration, reservoir completions, and coal mining. 1347

Coalbed methane in the Ordos basin

This paper analyzes structural domains in coalbed methane reservoirs in the Weibei coalbed methane field and geological, structural, and hydrological factors that affect gas generation, content, and saturation. Gas accumulation models and their implications for coalbed methane exploration are discussed. 1371