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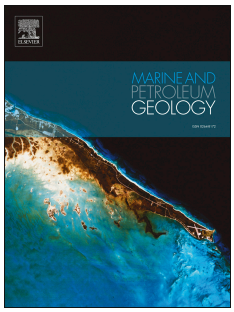

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Influence of Detrital Composition on the Diagenetic History of Tight Sandstones with Implications for Reservoir Quality: Examples from the Permian Xiashihezi Formation and Carboniferous Taiyuan Formation, Daniudi Gas Field, Ordos Basin, China

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ABSTRACT

Tight-gas reservoirs, characterized by low porosity and low permeability, are widely considered to be the product of post-depositional, diagenetic processes associated with progressive burial. This study utilizes a combination of thin section petrography, scanning electron microscopy, microprobe and back scatter electron analysis, stable isotope geochemistry and fluid inclusion analysis to compare the diagenetic history, including porosity formation, within sandstones of the second