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## Lower Tertiary Keathley Canyon Intra-Miocene Wedge and Salt Glacier

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### ABSTRACT

**Beneath the Keathley Canyon (KC) block off the southern Coast of Louisiana and Texas, allochthonous salt bodies have migrated into softer sedimentary layers attaining thicknesses of over 25,000 ft (7620 m). These salt bodies provide excellent seals and migration pathways for hydrocarbons produced by post-rift sedimentary deposition. This study intends to analyze a small portion of KC, specifically a complex geological structure found at approximately 25,000 ft (7600 m) utilizing Petrel seismic software and well information from the KC 102 (Tiber) well.**

**A wedge shaped geologic structure buried under KC salt may provide information about the movement of allochthonous salt over Wilcox aged sands, compaction of sediments, and creation of hydrocarbon pathways. Basinward progradational sedimentation is the driving force which led to faulting in the thin layers of the early Miocene. Active diapirism allowed a glacier-like intrusion of Jurassic Louann salt to accumulate in its space spreading laterally and upwards towards the surface. This intra-Miocene wedge left behind a series of scars containing several characteristics similar to the scarring left behind by a migrating ice glacier. Salt glacier movement is controlled by buoyancy and salt supply. When salt masses are more buoyant than their surrounding rock, they want to travel upwards and will migrate along the path of least resistance such as the faulted Miocene.**