Halokinetic sequences are localized (<1 km), unconformity-bound successions of growth strata adjacent to salt diapirs that form as drape folds due to the interplay between salt rise rate ($R$) and sediment accumulation rate ($A$). These diapir-proximal growth strata are generally poorly imaged even on high quality wide-azimuth seismic data. Their widespread distribution has been previously underappreciated in the subsurface, yet halokinetic sequences are critical for understanding and predicting column height, reservoir distribution and combined structural-stratigraphic trap geometry.

Hook and wedge halokinetic sequences stack vertically to form tabular and tapered composite halokinetic sequences (CHS), respectively. Tabular CHS have a narrow zone of stratal upturn (50-200 m), whereas tapered CHS have a broad zone of stratal upturn (50-200 m).

**Figure 1:** Oblique aerial photo of stratal geometries flanking the Patawarta diapir, South Australia. The Bunyeroo Formation and the overlying Wonoka Formation and Patsy Hill Member of the Bonney Sandstone display broad thinning within about 550 m (1800 ft) of the diapir and form two stacked tapered CHS with offset fold axial traces that trend approximately east, respectively (Hearon et al., 2015).


Testing the Applicability of Halokinetic Sequences in a Deepwater Depositional Setting: Auger Diapir, Northern Gulf of Mexico