A COMPARISON OF THE FISHER VALLEY AND GYPSUM VALLEY MEGAFLAPS, PARADOX BASIN, UTAH/COLORADO

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ABSTRACT

Megaflaps are steep panels of strata that extend far up the side of a salt diapir, having been deposited directly on top of a salt body and later rotated. The Paradox salt basin is an Ancestral Rocky Mountains foreland basin associated with the Uncompahgre Uplift, the primary sediment source of the basin. Two salt walls that are a product of this system are the distal Gypsum Valley and the proximal Fisher Valley. Both have megaflaps; the former has been evaluated, but the latter has not. My study will document the structural, sedimentologic and stratigraphic attributes of the Fisher Valley megaflap and compare it to the Gypsum Valley megaflap to understand how proximity to the Uncompahgre affected megaflap formation. My hypothesis is that since Fisher Valley is more proximal to the source, the megaflap will be thinner, but contain coarser grained sediments and will have formed earlier than the Gypsum Valley megaflap. Since megaflaps are difficult to image seismically, this study will provide important outcrop analogues to subsurface (e.g. Gulf of Mexico) salt diapirs, which remain some of our most important petroleum reserves.

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