

**UAS-Based Photogrammetry for Facies Architecture and Fluvial
Sequence Stratigraphic Definition of the Burro Canyon Formation,
Piceance Basin, Colorado**

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The Lower Cretaceous Burro Canyon Formation in the southwestern Piceance Basin, Colorado, is composed of deposits that represent a braided fluvial system with high net-to-gross that transitions stratigraphically upward into a low net-to-gross, low-sinuosity meandering fluvial system. I used well-exposed outcrops, detailed measured sections, and UAS-based imagery to describe the fluvial architecture of the late Cretaceous formation using a hierarchical approach. We described the Burro Canyon Formation as comprised of sandstone-rich amalgamated channel complexes overlain by non- to semi-amalgamated channel complexes. The characteristics and spatial distribution of architectural elements of the Burro Canyon Formation correspond to one depositional sequence. The erosional basal surface of the formation, as well as lateral changes in thickness and net-to-gross, suggest that the Burro Canyon Formation within this study area was deposited within multiple incised-valley fills. The study of fluvial deposits such as the Burro Canyon Formation serves as outcrop analogs for subsurface interpretation, modeling, and prospection of similar reservoirs.