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**Synsedimentary Tectonic and Sediment Supply Influences on Basin Physiography and Depositional Regime of the Western Interior Cretaceous Seaway, Wyoming**

Throughout the Upper Cretaceous synsedimentary tectonics exerted significant influence on the physiography and bathymetry of the Western Interior Seaway. Variations in subsidence/uplift created embayments in the shoreline, offshore banks and islands and at times may have partitioned the Seaway into sub-basins. These physiographic changes often produced corresponding changes in depositional regime.

Depending on sediment supply, structural lows at times were embayments and at other times were the sites of significant deltaic progradation and formed headlands. Delta's that prograded into structurally generated embayments commonly were current dominated, weakly to strongly tide-influenced and appear to have been protected from storm waves. Progradation was dominantly either to the south or south-east. Topset beds are typically absent possibly as a result of transgressive erosion/reworking. Examples of these types of deltaic deposits are present in the Shannon Sandstone, Frontier, Blair and (lower) Haystack Mountains formations.

When the sediment supply of deltas prograding into structural lows was sufficient to fill in the lows, prograde the shoreline and form deltaic headlands, embayments formed in inter-deltaic areas. "Headland delta's" show strong evidence of storm wave influence, little evidence of tides, and often have well preserved topset deposits. Extensive micro-tidal barrier island and tidal flat systems developed in inter-deltaic areas, but tidal currents within these types of embayments do not appear to have been significantly amplified and there is abundant evidence of storm wave influence. Examples of these types of deltaic (and inter-deltaic) deposits are present in the Almond, Williams Fork, Isles, Rock Springs and (upper) Haystack Mountains formations.