Deformation bands cropping out as resistant, centimeter-thick fins in the Jurassic Aztec Sandstone of the Valley of Fire State Park, Nevada. The view is to the south, with bleached middle Aztec in the foreground, iron oxide-stained lower Aztec in the mid-ground, and dark Paleozoic carbonates in the background some 6 km distant. The eolian depositional origin of the Aztec is apparent in its large-scale cross-bedding, while the bleaching is evidence of paleo-fluid flow likely related to hydrocarbon migration. Subparallel arrays of these low porosity and permeability deformation bands pervade the upper 800 m of the Aztec to comprise the oldest structural fabric present. Such pervasive deformation band fabrics would act as natural baffles to fluid flow in a reservoir, reducing bulk permeability and causing permeability anisotropy at scales relevant to production.