

Duchesne Fault Zone

Characteristics of the Duchesne Fault Zone

Half graben

Not a basement-involved fault system

Hingeline fault zone antithetic to the Uinta Basin fault

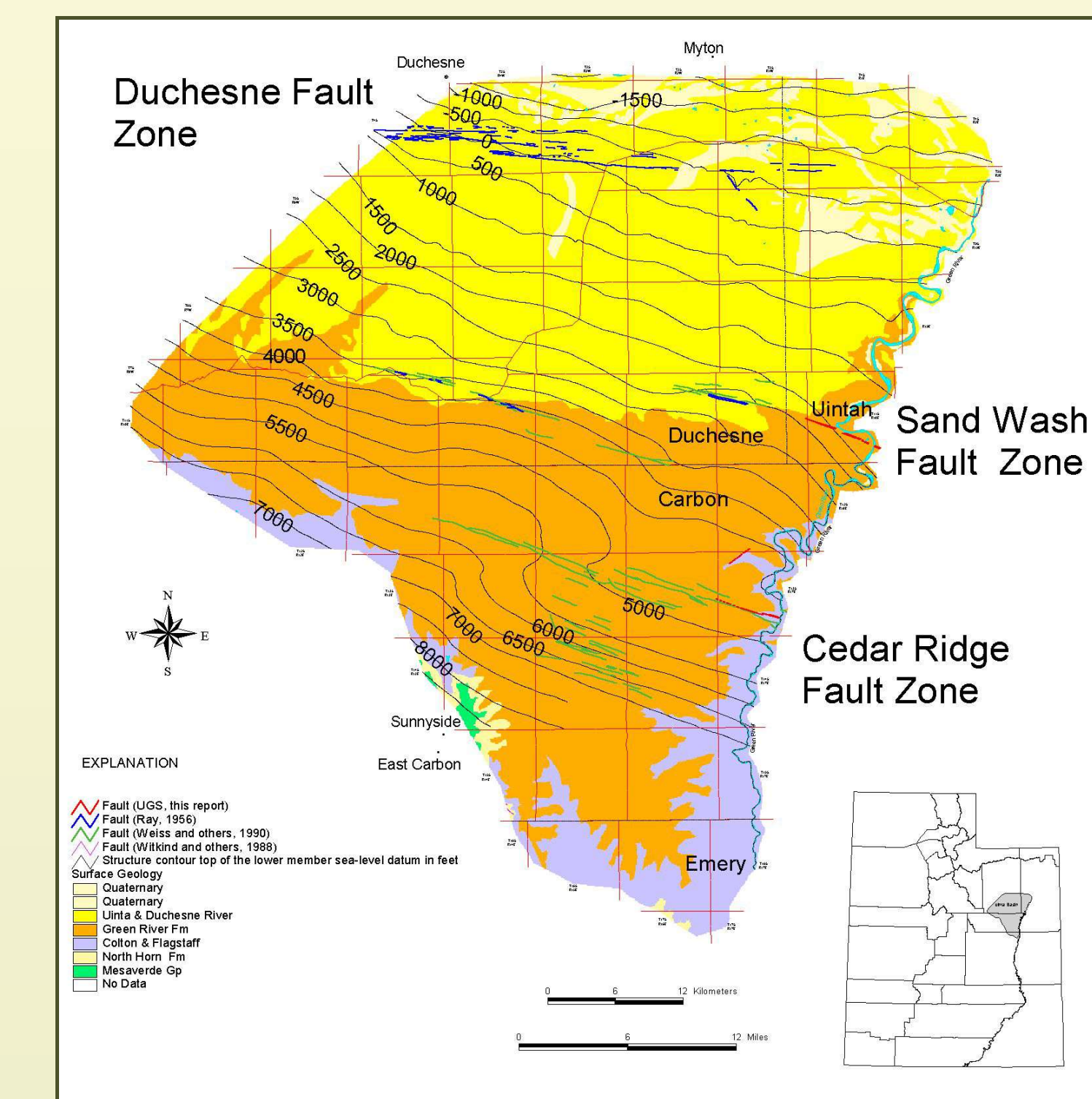
Maximum of 200 meters of slip on the master fault

Groeger and Bruhn (2001, AAPG v. 85, no. 9) proposed two models:

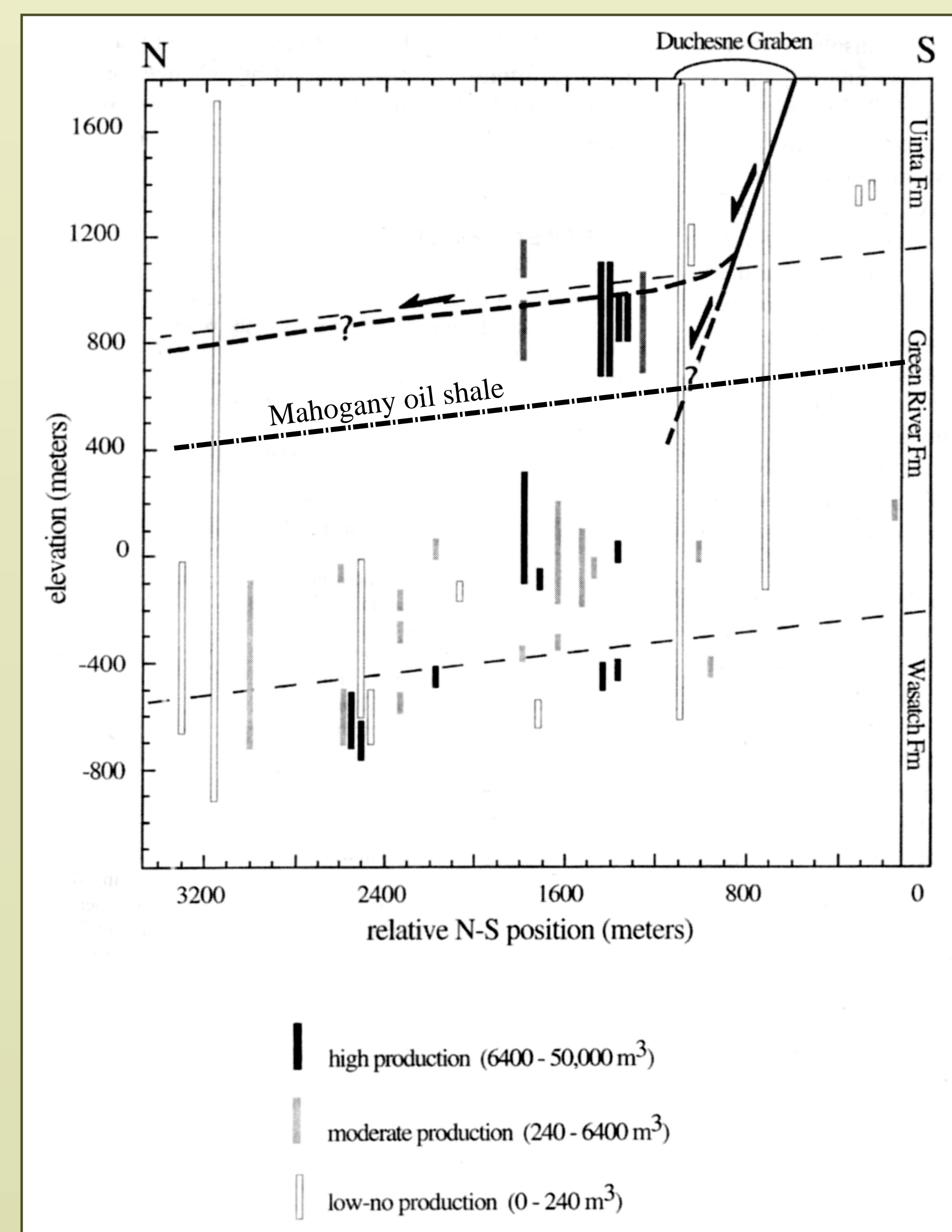
1. detachment fault becoming bedding-plane at about 930 meters depth, and
2. planar fault with the displacement decreasing with depth and dying out at a maximum depth of 1365 meters.

We believe the planar fault model is the best interpretation for the Duchesne fault zone based on examination of the Sand Wash fault zone.

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Photographs of the Duchesne fault in the Duchesne oil field.



Cumulative oil production from wells in the Duchesne oil field, projected into a north-to-south cross section across the Duchesne graben. Detachment and planar fault models are shown. Modified from Groeger and Bruhn, 2001.

