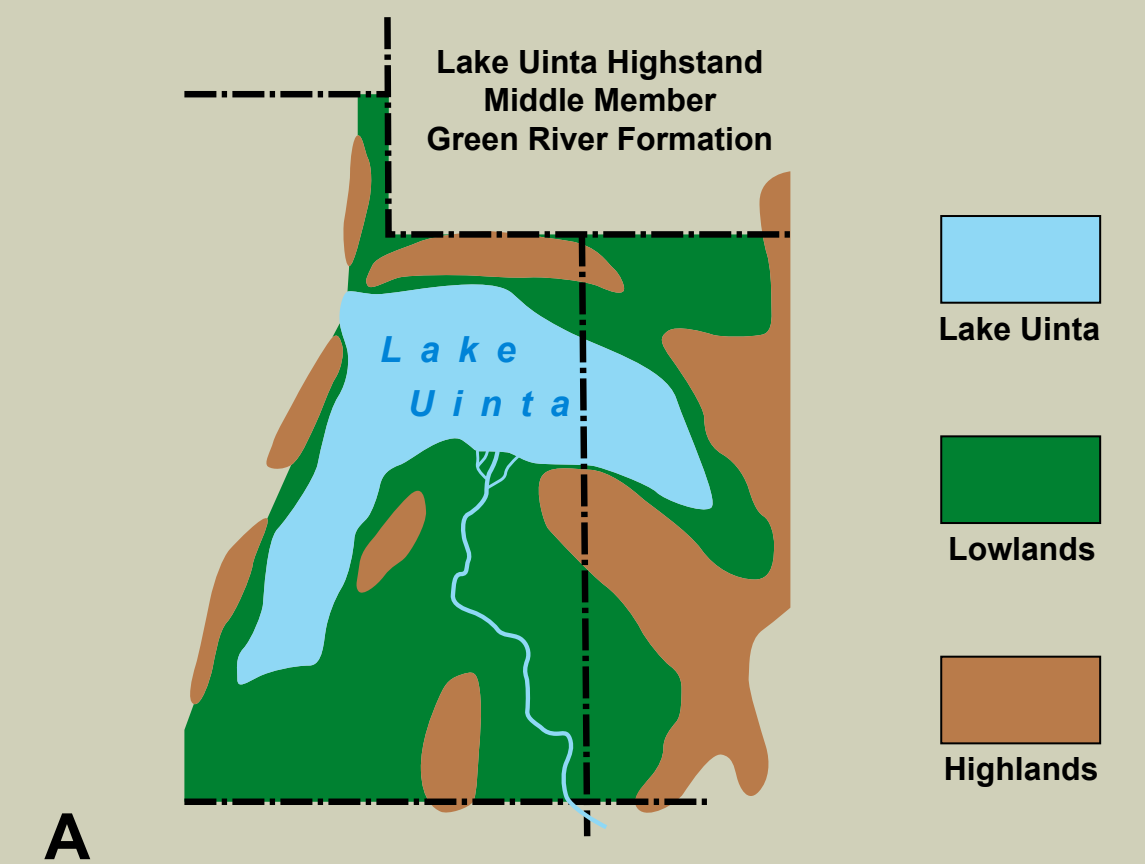
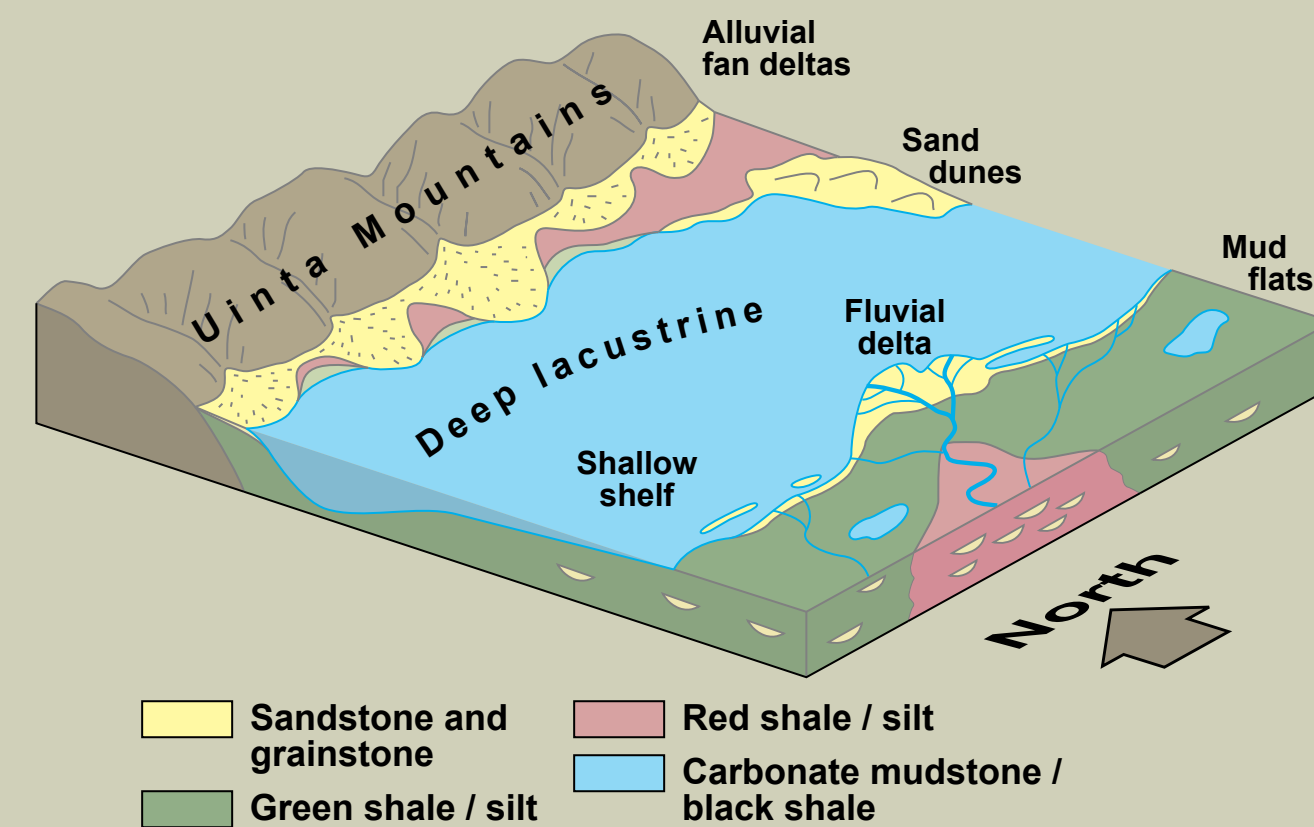


BASIN-WIDE CORRELATION OF PETROLEUM PLAYS AND SUBPLAYS IN THE GREEN RIVER PETROLEUM SYSTEM, UINTA BASIN, UTAH

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More than 1 TCF of associated gas has been produced from the lacustrine deposits of the Eocene Green River Formation in the Uinta Basin, Utah.

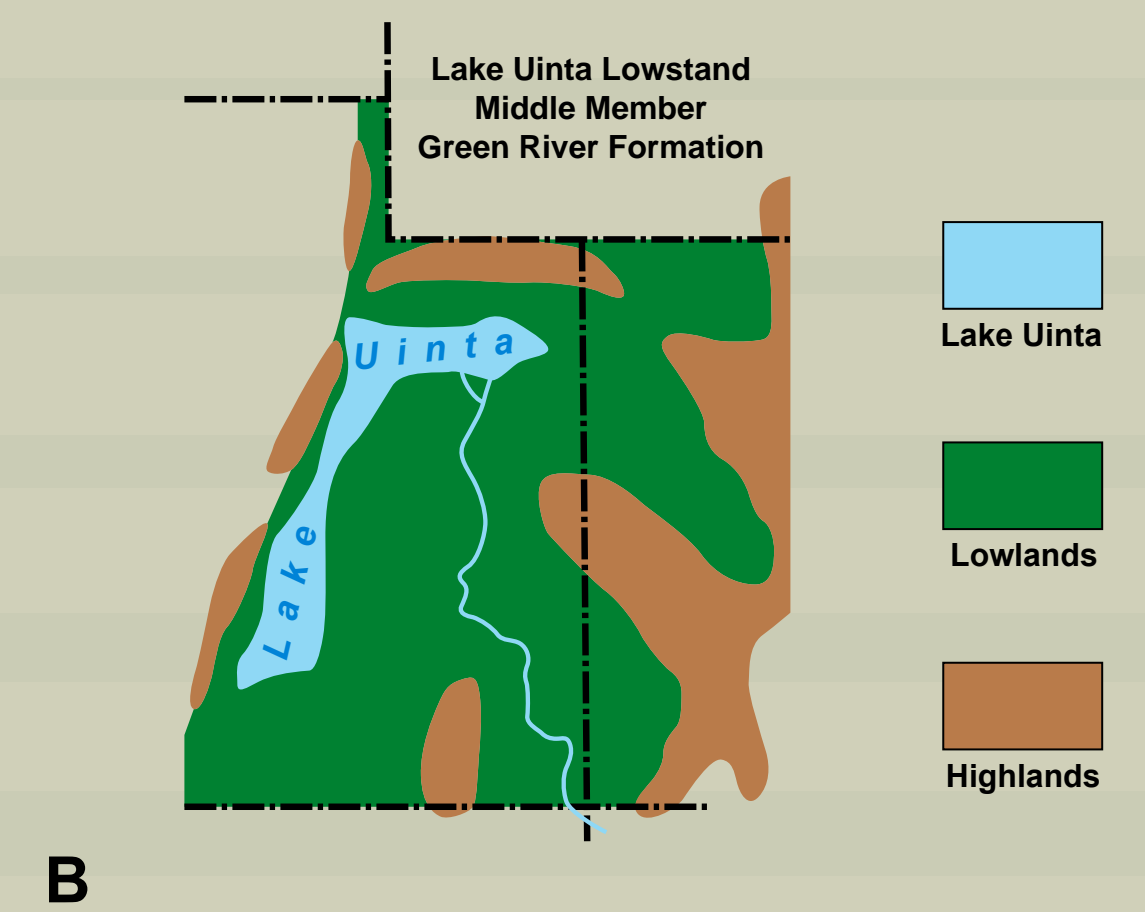
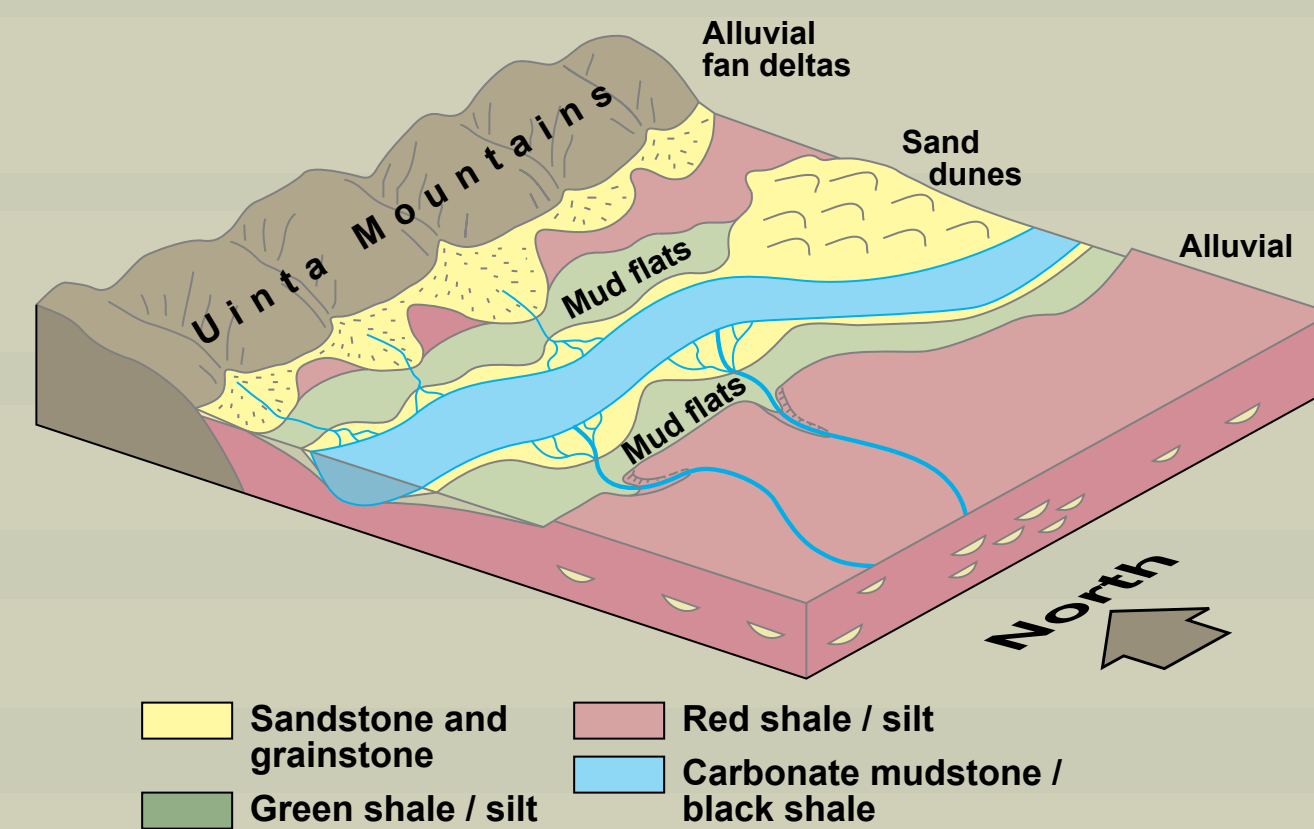
The Utah Geological Survey is conducting basin-wide chronostratigraphic correlation of petroleum plays and subplays within the Green River petroleum system in the Uinta Basin, northeast Utah. The Eocene Green River Formation, a highly oil-productive formation, consists of open- and marginal-lacustrine rocks deposited in and around Lake Uinta. Plays and subplays are stratigraphic intervals within the U.S Geological Survey's Green River assessment units, which consist of one or more potential reservoir beds having similar depositional history, petrology, and diagenesis. The play and subplay intervals are bounded by key marker beds identified on geophysical well logs that can be correlated basin-wide. The marker beds represent time lines allowing the chronostratigraphic correlation of very different reservoir rocks deposited in or near different parts of Lake Uinta. For example, reservoir rocks in the greater Monument Butte field area were deposited in the southern part of Lake Uinta at the same time that lithologically different reservoir rocks were being deposited in the Altamont-Bluebell fields and Red Wash field in the northern part of the lake. Although reservoirs of similar age in different parts of the basin have very different characteristics, they were influenced by similar conditions such as rapid lake-level fluctuations, stable lake conditions with minor lake-level fluctuations, or tectonism.



ACKNOWLEDGMENTS

This ongoing research is performed as part of a Utah Geological Survey (UGS) project titled Major Oil Plays in Utah and Vicinity, funded under the Preferred Upstream Management Program (PUMPII) of the U.S. Department of Energy, National Petroleum Technology Office (NPTO), Tulsa, Oklahoma, contract number DE-FC26-02NT15133. The Contract Manager is Rhonda Jacobs. Earlier research was performed under the UGS projects titled Reservoir Characterization of the Lower Green River Formation, Southwest Uinta Basin, Utah, funded under the Fundamental Geoscience for Reservoir Characterization Program of the NPTO, contract number DE-RA26-97BC15029, Virginia Weyland, Contract Manager and; Increased Oil Production and Reserves from Improved Completion Techniques in the Bluebell Field, Uinta Basin, Utah, under the Class I Oil Field Demonstration Program, contract number DE-FC22-92BC14953, Gary Walker, Contract Manager.

Discussions with S. Robert Bereskin, Jim Borer, Russ Griffin, David Keighley, and Mary McPherson, have greatly improved our understanding of the geology of the Green River Formation. Vicky Clarke and Jim Parker of the UGS drafted figures and designed displays.



Diagrams showing the generalized depositional settings for Lake Uinta during high lake levels (A) and low lake levels (B). The Uinta Mountains were the source for the sediments in the northern portion of the lake while sediments in the southern portion of the lake were sourced from the much larger Four Corners area.