The dominantly carbonate Uteland Butte Member of the Eocene Green River Formation has historically been a secondary oil target of wells primarily targeting shaly reservoirs and deeper, more saline sandstones in the lower Green River Basin. Historically, the Uteland Butte Member records the last major transgression of Green Lake into the deposition of the Great Clastic Province. The Uteland Butte ranges in thickness from less than 60 ft to more than 200 ft and consists of limestone, dolomite, organic-rich calcareous mudstone (oil-shale), siltstone, and rare sandstone. The dolomite, the new horizontal drilling, often has more than 20% porosity, but it is generally cemented and less productive than the dolomite in the previous Uteland Butte sandstone. The Uteland Butte is in the southwestern part of the basin, and the dikes are carbonatite in the northwestern part of the basin. The Uteland Butte is the most productive Uteland Butte play.

**PROJECT GOALS**

The overall goal of the three-year Department of Energy-funded project, which commenced December 2013, is to provide reservoir-specific geologic and engineering analyses of the emerging Unconventional Green River Formation (UGR) play in the Uinta Basin, Utah. Specific goals are as follows:

1. Characterize geologic, petrophysical, and geomechanical rock properties of GRF horizontal targets by compiling data and by analyzing available core, cuttings, and well-log data.
2. Describe reservoir-resevoir and gas-oil (GOR) plays and compare them to subbasin data.
3. Map major regional trends for regional lithology and identify “sweet spots” that have the greatest potential for production.
4. Optimize well completion and design for GRF horizontal plays (not included in this project).

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**REFERENCES**


Morgan and others (2003) on map of Wasatch/Colton Fm.

Vanden Berg (2008) OIL SHALE ZONES

Project website: http://geology.utah.gov/emp/shale_oil

Data_Center/DataCenter.cfm, accessed March 2013.

Panels 1 and 2 from DNR—Natural ButtesCore housed at the University of Wyoming, Laramie, WY.

Mahogany Liner Oil Field

Kearns and others (2002) on map of Laramie Range-Int. Reservoir - 1999 Annual AAPG	Panel 1


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Panel project website: http://geology.utah.gov/emp/shale_oil