

**U.S. Geological Survey**  
**Digital Data Series DDS-69-G**

*National Assessment of Oil and Gas Project:*

**Facies Analysis and Sequence Stratigraphic Framework of Upper Campanian Strata (Neslen and Mount Garfield Formations, Bluecastle Tongue of the Castlegate Sandstone, and Mancos Shale), Eastern Book Cliffs, Colorado and Utah**

By Mark A. Kirschbaum and Robert D. Hettinger

U.S. DEPARTMENT OF THE INTERIOR  
Gale A. Norton, Secretary

U.S. GEOLOGICAL SURVEY  
Charles G. Groat, Director

For sale by U.S. Geological Survey Information Services  
Box 25286, Building 810  
Denver Federal Center  
Denver, CO 80225-0086  
Telephone (303) 202-4200

For more information about the U.S. Geological Survey and its products:  
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## **Introduction**

The purpose of the U.S. Geological Survey's National Oil and Gas Assessment is to develop geologically based hypotheses regarding the potential for additions to oil and gas reserves in priority areas of the United States. This study was completed in support of the oil and gas assessment of the Uinta-Piceance Province.

The study develops a sequence stratigraphic framework for about 600 ft of Upper Cretaceous strata that are exposed in the Book Cliffs and traceable into the adjacent subsurface areas, between Grand Junction, Colorado, and Green River, Utah, a distance of about 100 mi. About 25 stratigraphic sections were measured on outcrop, four subsurface cross sections were constructed from oil and gas drill holes, and three cores were described to calibrate the geophysical logs to the rock record. Facies and sequence-stratigraphic analysis identifies six high-resolution sequences within part of the Se-go Sandstone and the Neslen Formation in Utah, equivalent strata of the Mancos Shale and Mount Garfield Formation in Colorado, and part of the Bluecastle Tongue of the Castlegate Sandstone. The USGS used this geologic framework to define one total petroleum system and four assessment units within the total petroleum system, and quantitatively estimated the undiscovered coalbed gas resources within each assessment unit.

## **Contact Information**

This volume is one of a series of products resulting from the National Oil and Gas Assessment project of the U.S. Geological Survey. Inquiries about this CD-ROM or the project should be addressed to:

Mark A. Kirschbaum  
U.S. Geological Survey  
Box 25046, Mail Stop 939  
Denver Federal Center  
Denver, CO 80225-0046

Telephone: (303) 236-7792  
E-mail: [mkirsch@usgs.gov](mailto:mkirsch@usgs.gov)

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## **Using This CD**

The descriptive and interpretive text chapters of this volume are in Portable Document Format (PDF). Use Acrobat Reader 6.0 (installer for Macintosh and Windows provided on this CD) to access and bring up these chapters.

The PDF chapters are accessible as defined by Section 508 of the Rehabilitation Act.

## **Contents of This CD-ROM**

When the CD is opened, the following folders appear on the screen:

ACROBAT—contains installer for Acrobat Reader 6.0.

APPENDIX—contains oblique aerial photographs in pdf format.

OPEN\_FIRST—from OPEN\_FIRST.pdf in this folder, navigate to the ReadMe file, Report file, Plate files and Appendix files.

README—you can access the ReadMe file from this folder also.

REPORT—Contains pdf file of report.

## **System Requirements**

### **MAC OS**

- Power PC G3 processor
- Mac OS X v.10.2.2 or later
- 32 MB RAM (64 MB RAM recommended)
- 70 MB of available hard drive space for installation

### **WINDOWS**

- Microsoft Windows 98 Second Edition, Windows Millennium Edition, Windows NT.4.0 with Service Pack 5 or later, Windows 2000 with Service Pack 2, Windows XP Professional or Home Edition, Windows XP Tablet PC Edition
- 32 MB RAM (64 MB RAM recommended)
- 60 MB of available hard disk space