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National Oil and Gas Assessment Project:
**Geologic Assessment of Undiscovered Oil and Gas in the
Powder River Basin, Wyoming and Montana**

By U.S. Geological Survey Powder River Basin Assessment Team

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Introduction

The purpose of the U.S. Geological Survey's (USGS) 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. The U.S. Geological Survey (USGS) recently completed an assessment of the undiscovered oil and gas potential of the Powder River Basin Province which encompasses about 21.8 million acres in northeast Wyoming and southeast Montana.

The assessment is based on the geologic elements of each total petroleum system (TPS) defined in the province, including hydrocarbon source rocks (source-rock maturation, hydrocarbon generation, and migration), reservoir rocks (sequence stratigraphy and petrophysical properties), and hydrocarbon traps (trap formation and timing). Using this geologic framework, the USGS defined six TPSs: (1) Pennsylvanian-Permian Composite TPS, (2) Mowry TPS, and (3) Niobrara TPS, (4) Paleozoic-Mesozoic Composite TPS, (5) Tertiary-Upper Cretaceous Coalbed Methane TPS, and (6) Cretaceous Biogenic Gas TPS. Within these systems, 11 Assessment Units (AU) were defined and undiscovered oil and gas resources were quantitatively estimated.



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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:

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Using This CD

The descriptive and interpretive text chapters of this volume are in PDF format. Use Acrobat Reader Version 7.0 or later to access and these chapters.

Contained on this CD-ROM are tabular data and graphical data in support of the assessment. The chapter text PDF contains links to the data and images. Data-table files are presented as tab-delimited text files (.tab files), usable in spreadsheet and database software. Graphical and summary-table files are presented as portable document format files (.pdf files).

GIS information is presented in the Spatial folder and its subfolders that contain the spatial data and documentation.

The Spatial/Doc folder contains metadata for the Powder River Basin spatial data in .htm format. The spatial/shape folder contains ArcView/ArcGIS shapefiles.

Contents of This CD-ROM

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

OPEN_FIRST—from OPEN_FIRST.pdf in this folder, navigate to the ReadMe file and Assessment Reports.

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

REPORTS—listing of, and links to, the chapters, plus the tabular data.

SPATIAL—folder containing files for the GIS data and metadata.

There are several routes to the information in this volume.



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