

U.S. Geological Survey Digital Data Series DDS-69-CC

National Assessment of Oil and Gas Project

Geologic Assessment of Undiscovered Gas Hydrate Resources on the North Slope, Alaska

By U.S. Geological Survey Alaska Gas Hydrate Assessment Team

U.S. DEPARTMENT OF THE INTERIOR

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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 USGS has completed an assessment of the undiscovered gas hydrate resources on the North Slope, Alaska.

This assessment is based on the geologic elements of Northern Alaska Gas Hydrate Total Petroleum System (500102), including hydrocarbon source rocks (source-rock type and maturation and hydrocarbon generation and migration), reservoir rocks (sequence stratigraphy, petrophysical properties, seismic attribute development, and prospecting), and hydrocarbon traps (trap formation and timing). Within the Northern Alaska Gas Hydrate Total Petroleum System (500102), three Assessment Units (AU) were defined (Nanushuk Formation Gas Hydrate AU-50010203, Tuluwak-Schrader Bluff-Prince Creek Formations Gas Hydrate AU-50010202, Sagavanirktok Formation Gas Hydrate AU-50010201) and the undiscovered natural gas resources in gas hydrate were quantitatively estimated to range between 25.2 and 157.8 trillion cubic feet (TCF) (95-percent and 5-percent probabilities of greater than these amounts), respectively, with a mean estimate of 85.4 TCF.

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.

Contained on this CD-ROM are tabular data and graphical images in support of the assessment. This report contains tabular data and graphical images in support of the undiscovered, technically recoverable gas hydrate resources in Cretaceous and Tertiary rocks, North Slope and adjacent State waters, Alaska.

The USGS Central Energy Resources Team has developed an Internet Map Service to deliver the GIS data to the public. The Spatial data that formed the basis of the GIS are provided online at the USGS National Oil and Gas Assessment Web site (NOGA Online: <http://energy.cr.usgs.gov/oilgas/noga>). Most of the base cartographic data layers used in the GIS project were obtained from the U.S. Department of the Interior National Atlas Web site, www.nationalatlas.gov or the U.S. Geological Survey National Map, <http://nationalmap.gov/>.

Contents of This CD-ROM

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

OPEN_FIRST—allows convenient access to REPORTS, READ_ME, and EXECUTIVE SUMMARY PDF files.

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

REPORTS—Executive Summary and text of DDS-69-CC.



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