
Oil & Natural Gas Projects

Exploration & Production Technologies

Basin Centered Gas Study

DE-AT26-98FT40031

Goal:

The goal of this project is to determine the location of "sweet spots" where basin centered gas resources are most likely to be produced.

Background:

The objective of this DOE/USGS co-funded project was to identify and characterize the geologic and geographic distribution of basin-centered gas accumulations throughout the U.S., including Alaska, and analyze their potential significance to future natural gas exploration and development. This project utilized state-of-the-art procedures and knowledge of basin-centered gas systems, including, stratigraphic analysis, organic geochemistry, basin thermal dynamics and reservoir and pressure analyses. For each potential accumulation, this information was used to assess the existence of a basin-center gas and to map areas of favorable production characteristics (sweet spots) of the accumulation considered to have the best resource potential.

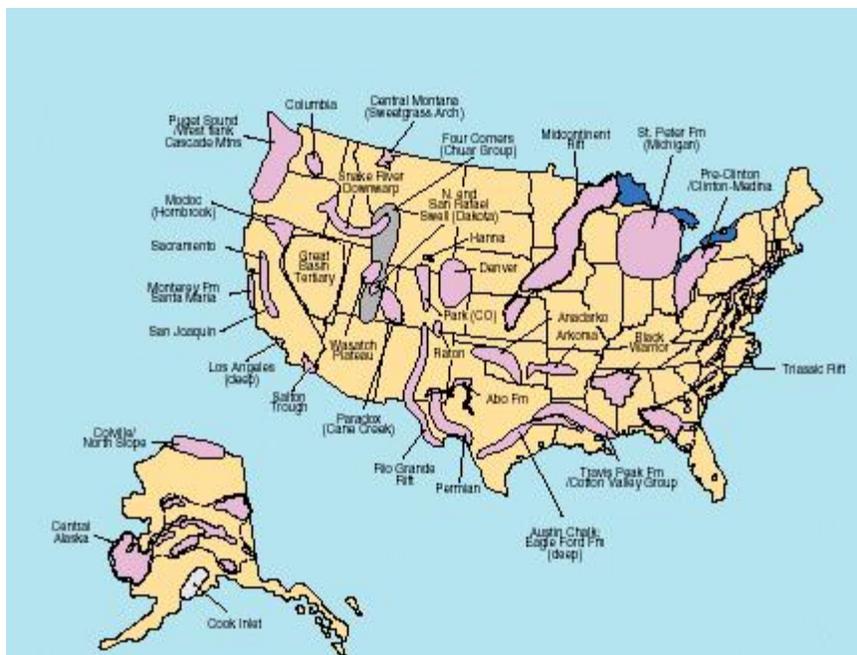
Performer: U.S. Geological Survey

Location:

Denver, Colorado 80225

Project Impact:

This completed project has served as an important source of information to both industry and government organizations concerned with developing appropriate strategies for recovering natural gas from reservoirs within basin-centered accumulations in the U.S. The final report on CD-ROM, available from DOE/NETL has been a sought-after source of information for many years following completion of the project.



Map showing locations of the basins or areas screened for potential basin-center accumulations.

Accomplishments:

The USGS conducted a National inventory of known basin-centered gas systems and defined new potential systems previously classed as conventional accumulations. Thirty-three basins were identified and characterized based on data from the published literature and from well and reservoir databases. Each potential accumulation was ranked according to level of geologic certainty and the geologic and geographic characteristics of the basins were further delineated. A map was produced showing the basin's geographic location as well as supporting documentation of their stratigraphic location and geologic characteristics.

The USGS defined "sweet spots" within seven basin-centered gas systems deemed to have high potential accumulations. These seven basins included the Sacramento/San Joaquin basins, Raton Basin, Rio Grande Rift, Anadarko Basin, Travis Peak/Cotton Valley, Columbia Basin/W. Flank of the Cascades, Michigan Basin/St. Peter Sandstone. Base maps, structure contour, isopach, thermal maturity and other maps were constructed for each basin.

Current Status and Remaining Tasks:

This project has been completed and a final report submitted to DOE. The report includes a digital map showing all defined basin centered gas systems for the U.S., documentation of geologic characteristics, identification of "sweet spots" and recommendations to industry and government for further development.

Project Start Date: April 7, 1998

Project End Date: April 30, 2001

DOE Contribution: \$349,499

Performer Contribution: \$0

Contact Information:

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Additional Information:

Final Report - [PDF - 3110KB] Basin Centered Gas Systems of the U.S.

Studies of Natural Gas Resources in Deep Sedimentary Basins- Phase I Report [PDF]