Play Analysis and Digital Portfolio of Major Oil Reservoirs in the Permian Basin: New Mexico

Ronald F. Broadhead, William D. Raatz, Shirley P. Dutton, and Eugene M. Kim

1 New Mexico Bureau of Geology and Mineral Resources, a division of New Mexico Tech, Socorro NM 87801
2 New Mexico Bureau of Geology and Mineral Resources, present address Okie-Perrin, Houston TX
3 Bureau of Economic Geology, University of Texas at Austin, Austin TX 78713

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Abstract

This presentation provides a digital portfolio for the Permian Basin with the highlighted reservoirs of 8 of the 10 primary oil productive intervals. The Permian Basin is a world-class oil basin containing significant volumes of light, sweet, low-sulfur oil. These reservoirs are the result of the prolific accumulation of organic-rich sediments in the central U.S. This presentation will cover the stratigraphy, structural setting, and reservoir characteristics of these intervals. It is comprised of a detailed reservoir analysis and a digital reservoir database that is used to analyze trends and patterns that exist in the formation, development, and production of the Permian Basin.

The Permian Basin is divided into three major structural regions: the Western Interior, the Western Interior, and the Midland Basin. These regions have different geological settings and have been tectonically active for different periods of time. The Western Interior region is characterized by thick sequences of Cretaceous and Permian sediments. The Western Interior Basin is characterized by a series of tilted fault blocks that have been uplifted and eroded. The Midland Basin is characterized by a series of tilted fault blocks that have been uplifted and eroded.

The upper and lower Permian formations are the most prolific organic-rich sediments in the Permian Basin. These formations are characterized by thick sequences of Cretaceous and Permian sediments. The upper Permian is characterized by a series of tilted fault blocks that have been uplifted and eroded. The lower Permian is characterized by a series of tilted fault blocks that have been uplifted and eroded.

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Pennsylvanian plays 424 MMBO

Guadalupian (Upper Permian) Plays

- Lea Bluff Member (Lower Guadalupian) - 3,000 MMBO in production
- Garden Valley Member (Upper Guadalupian) - 1,500 MMBO in production
- Middle Member (Upper Guadalupian) - 1,000 MMBO in production

Wolffcampian and Leonardian (Lower Permian) Plays

- Wolfcamp Formations (Wolfcampian) - 5,000 MMBO in production
- Leonardian Formations (Leonardian) - 2,000 MMBO in production

Pennsylvaniaian Plays

- Wolfcampian - 6,000 MMBD in production
- Leonardian - 2,000 MMBD in production

Pennsylvaniaian plays 424 MMBO

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References