Maps Showing Sedimentary Basins, Surface Thermal Maturity, and Indications of Petroleum in the Central Alaska Province

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1. Sedimentary basins and selected geologic features of regional importance.

2. Patterns of surface thermal maturity.

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The petroleum system of the Central Alaska Province includes a complex assemblage of geologic, geophysical, and geochemical elements that are critical to the exploration and production of hydrocarbons. The system is characterized by a variety of sedimentary basins and structural features that provide a framework for the accumulation and preservation of petroleum. The Central Alaska Province is situated in the western part of the Alaska Range and extends from the southern margin of the Alaska Peninsula to the northwestern corner of the Kenai Peninsula. It encompasses a diverse array of geologic settings, including fold-thrust belts, foreland basins, and areas of active and past volcanic activity. The province is bounded by major tectonic structures, such as the Alaska Peninsula Trench and the Alexander Archipelago Trench, which influence the distribution and properties of petroleum reservoir rocks. The petroleum system of the Central Alaska Province is extensively studied, and numerous petroleum exploration efforts have been undertaken in the region. The exploration efforts have been facilitated by an extensive network of geophysical data, including seismic surveys, well logs, and various types of remote sensing imagery. The petroleum system of the Central Alaska Province is a prime example of the complex interplay between tectonic processes, sedimentation, and the thermal evolution of the earth's crust that leads to the formation and preservation of petroleum deposits.