

The Petroleum System concept

The concept of the Petroleum System has proven useful to both the scientific understanding of petroleum and the practical exploration for

petroleum. This page proposes two definitions as an introduction to several pages that follow.

Petroleum system: The integration in time and space of source, migration, reservoir(s), trap(s), and seal(s).

Critical moment: The time of source-rock maturation and of migration of petroleum into its primary trap.

A source, a migration pathway, a reservoir, a trap, and a seal are essential to a petroleum accumulation. However, they are collectively insufficient if they are not arranged in space appropriately at the time/depth/temperature when petroleum can be expelled from a source rock through a migration pathway to a reservoir enclosed by a seal in a trapping configuration. Each of these five elements may have originated at different times and in different places, but they must arrive through time and space in one contiguous system to create a petroleum accumulation during the critical moment.

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