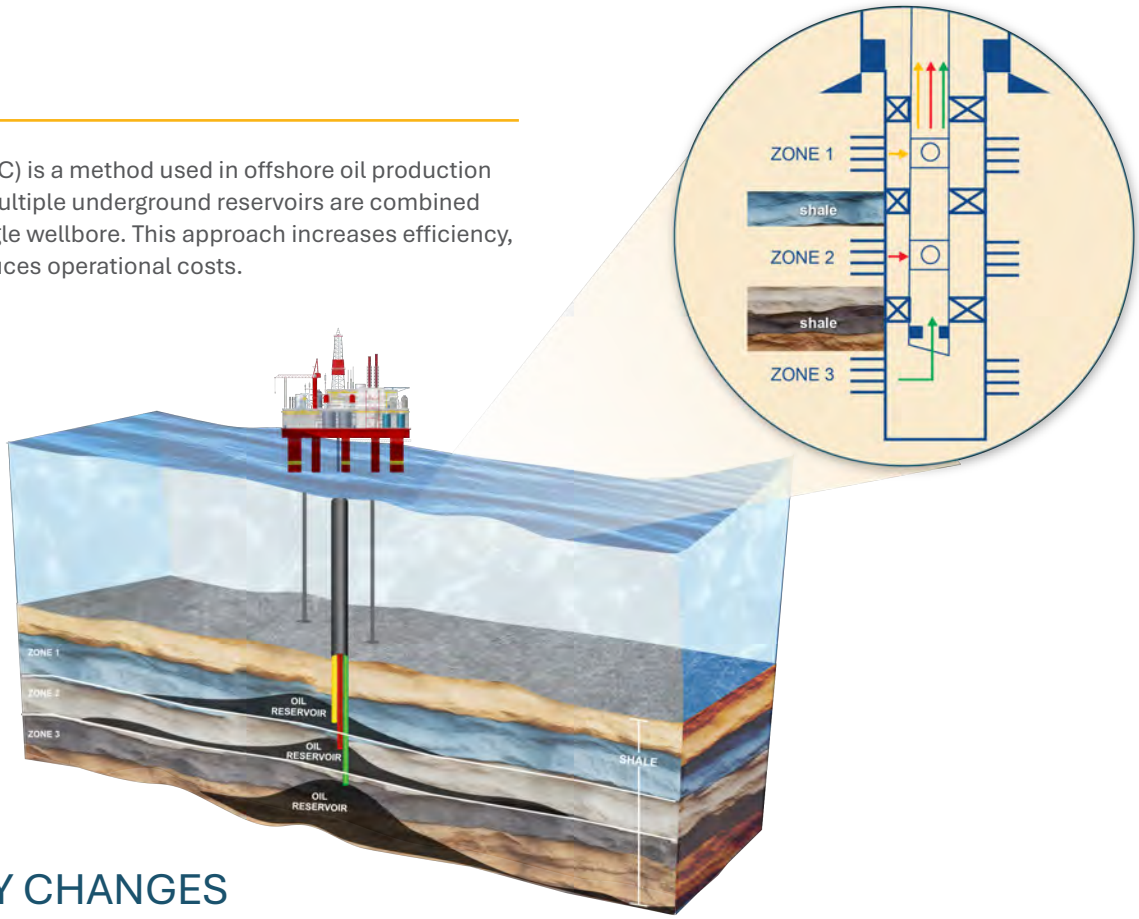
Bureau of Safety and Environmental Enforcement

Downhole Commingling (DHC) in the Gulf of America

FACT SHEET

OVERVIEW

Downhole commingling (DHC) is a method used in offshore oil production where hydrocarbons from multiple underground reservoirs are combined and produced through a single wellbore. This approach increases efficiency, optimizes recovery, and reduces operational costs.



RECENT POLICY CHANGES

- Updated Pressure Guidelines: The Bureau of Safety and Environmental Enforcement (BSEE) now allows a higher pressure differential (up to 1500 psi) for commingled production in deepwater Paleogene (Wilcox) reservoirs, an increase from the previous 200 psi limit.
- Production Impact: The policy shift is expected to increase oil output significantly, potentially adding about 180 million barrels over the next decade.

WHY COMMINGLING MATTERS

- Economic Efficiency: Reduces the number of wells needed, lowering operational costs and accelerating production timelines.
- Increased Oil Recovery: Studies indicate commingled wells recover significantly more oil—61% more over 30 years compared to sequential production methods.
- Supports American Energy Goals: Aligns with U.S. objectives of energy independence, affordability, and job creation outlined in President Trump's "Unleashing American Energy" directive.

SCIENTIFIC AND TECHNICAL INSIGHTS

- Pressure Differentials: Large pressure differences between commingled reservoirs must be carefully managed to prevent crossflow, which could otherwise reduce oil recovery.
- Fluid Compatibility: Ensuring fluids from different reservoirs can safely mix without causing blockages or corrosion is critical to well integrity and efficiency.
- Intelligent Completions: Advanced technologies, such as sensors and remotely controlled valves, allow precise control over each reservoir layer, optimizing production and preventing issues like crossflow.
- Crossflow Risks: Unmanaged crossflow can lead to internal losses of oil between reservoirs. Proper zonal isolation techniques and intelligent completions mitigate these risks.

INDUSTRY COLLABORATION AND RESEARCH

- Industry Engagement: BSEE actively collaborates with industry leaders, trade associations, and others, to continually refine and improve commingling policies.
- Ongoing Studies: Recent research from the University of Texas informs the updated guidelines, emphasizing that commingled production methods significantly outperform sequential approaches.

SAFETY AND ENVIRONMENTAL COMMITMENT

- BSEE mandates rigorous safety and environmental standards for commingling operations.
- Operators must demonstrate ongoing compliance through regular monitoring, advanced surveillance, and reporting protocols.

FUTURE ACTIONS

- Continuous Improvement: BSEE has allocated funding ($500,000) for further study to ensure commingling policies remain effective and aligned with the latest science and industry practices.
- Stakeholder Engagement: Active communication and collaboration with industry stakeholders will continue to guide policy development.