Brief

Proponents: ExxonMobil.
Location: Wyoming, U.S.A.
Capacity: 6-7Mt/pa.
CO₂ Source: LaBarge oil field.
Capture type: Pre combustion, gas processing.
Storage Type: Enhanced Oil Recovery.

Summary

A pipeline transports natural gas from the LaBarge oil field to the Shute Creek processing facility in Wyoming. The natural gas is nearly 65% CO₂ when it enters the Shute Creek facility, where the CO₂ as well as methane and helium are separated and captured for commercial sale.

Most of the CO₂ is transported via pipelines to several oil fields in Wyoming and Colorado for use in enhanced oil recovery (EOR).

A lesser amount is injected and stored in the same reservoir from which the gas was extracted.

The Shute Creek facility is regarded as one of the largest CCS projects in the United States. An expansion of the facility was completed in 2010 and ExxonMobil captured more than 6M tonnes of CO₂ for sequestration in 2014.

The Shute Creek facility uses Controlled Freeze Zone technology; a cryogenic separation process that freezes out and then melts the CO₂ in order to capture it.

Through its investment in EOR projects, ExxonMobil continues to gain knowledge of safe CO₂ storage techniques – the cornerstone of a commercially viable, successful CCS program.