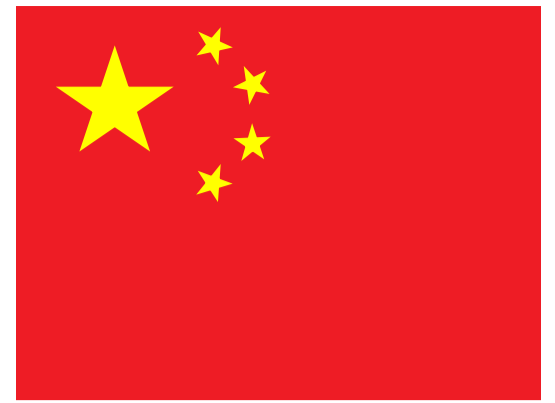


Near-Zero Methane Emission Demonstration Area for Natural Gas Exploitation



PROJECT DESCRIPTION

- The Southwest Oil & Gas Field, one of the largest natural gas production areas in China, has implemented the idea of near-zero emissions and started a demonstration project covering an area with a gas production rate of over 30 billion meters³ annually since 2021. A series of mitigation measures on fugitive emissions, venting methane emissions, and flaring were adopted such as:
 - A real-time monitoring platform based on infrasonic fiber, laser, and cloud imaging technologies;
 - Site-level methane quantification based on drones;
 - On-site methane emission detection robots;
 - Venting gas recovery and flaring reduction.

PARTNERS INVOLVED IN PROJECT

PetroChina Southwest Oil & Gasfield Company

China / Asia



RESULTS ACHIEVED

- The spatially gridded methane emission detection management, together with the gas recovery technologies from wellhead to gas processing plants, has enabled the demonstration project to reach its near-zero methane emission target.
- The project captured and reused a total of 490 million cubic meters of scattered gas and vented gas, 24 flaring torches were extinguished, and a total of 7,000 tons of methane emissions were reduced.
- The project deployed a total of 221 methane leakage laser head monitoring equipment, 21 gas cloud imaging equipment, 11 pipeline infrasonic leakage monitoring systems, and 4 intelligent inspection robots which led to a decrease in the methane leakage rate from 0.35% to less than 0.02%.

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