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A Scenario for Water Acidization of CO₂ Sequestration Wells in Carbonate Aquifers

Deep saline carbonate aquifers offer a significant opportunity to sequester CO₂ in large amounts from only a single well by the proposed technology. This opportunity is achieved by injection of water into the lower portions of existing limestone reservoirs along with the CO₂ being sequestered. The result is a continuous acidization of the reservoir for increased injectivity by turning limestone into calcium bicarbonate ions. This paper provides a scenario to detail this significant opportunity