



Emerald Operating Co. CBM (CSG) Timeline – Kingsbury Area

The wells were shut in until spring 2015, when the first generation GEM Tool was installed and gas sales resumed. However, in 2016, the gas purchaser terminated all gas sales for operators in the Kingsbury area. In response, Emerald purchased a pipeline to connect to a different gas sales line and installed second generation GEM Tools.

Successfully treated and evaluated results from six wells with four different types of coal using Food Grade Carbohydrates (FGC) to produce Renewable Natural Gas (RNG).

Optimized the GEM Tool and adjusted GEM Tool string configurations downhole in wells. Initiated on-site BTC mining using produced gas to generate electricity for BTC miners.

Permitted, drilled, completed, de-watered, and produced 71 CBM (CSG) wells, in addition to the approximately ~100 CBM wells that Emerald already drilled and operated in Northeast Wyoming. Continued low gas prices caused all wells to be shut in during May 2009.

2001-2009

2009-2017

2017-2019

Resume gas sales as of May 2018, and equip the wells with the 3rd Generation GEM Tool.

2019-2021

2021-2024

Successfully treated and evaluated the results of 11 wells across 7 different coal types using proprietary amendments to generate renewable Bio-H₂ (B-H₂).

2024-2025

2026

Simplified and optimized the GEM Tool design for international use, known as the AMT Tool. Initiated downhole testing of AMT Tool strings in wells.