

# Carbon dioxide foam fracturing services

## Minimize water use while optimizing stimulation

### Applications

- Hydraulic fracturing operations in low-pressure or water-sensitive reservoirs
- Hydraulic fracturing operations in areas where water use is limited due to environmental regulations or availability
- Multistage hydraulic fracturing where mechanical diversion is inadequate to ensure treatment of the full length of each stages

### Features and Benefits

- Low water requirement
  - Improves cleanup time from low-pressure wells
  - Minimizes formation damage
  - Limits environmental impact
- Low viscosity
  - Enables proppant transport
  - Reduces fluid loss to the formation, enabling deeper penetration
  - Enables diversion in long well segments
- Compatible with a wide variety of common fracturing fluids, additives, and proppants
  - Improves application flexibility
  - Reduces testing requirements

Tight formations with low permeability, low bottomhole pressure, extreme sensitivity to conventional treating fluids, or the tendency to release a large amount of fines are all candidates for the Baker Hughes carbon dioxide foam fracturing services.

Carbon dioxide (CO<sub>2</sub>) foam creates a system with good viscosity, superior proppant transport, and excellent fluid loss control. These characteristics also make it a capable diverting fluid. Additives can be used to provide higher viscosity, more stability, and better fluid loss control.

Foamed systems are also an excellent option for fracturing in areas where water availability is limited.

### Safety and handling

Refer to fluid system component material safety data sheets (MSDS) for handling, transport, environmental information, and first aid.

### Reference

System component MSDS

### Typical properties

Typical temperature range	90 to 275°F (32 to 135°C)
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