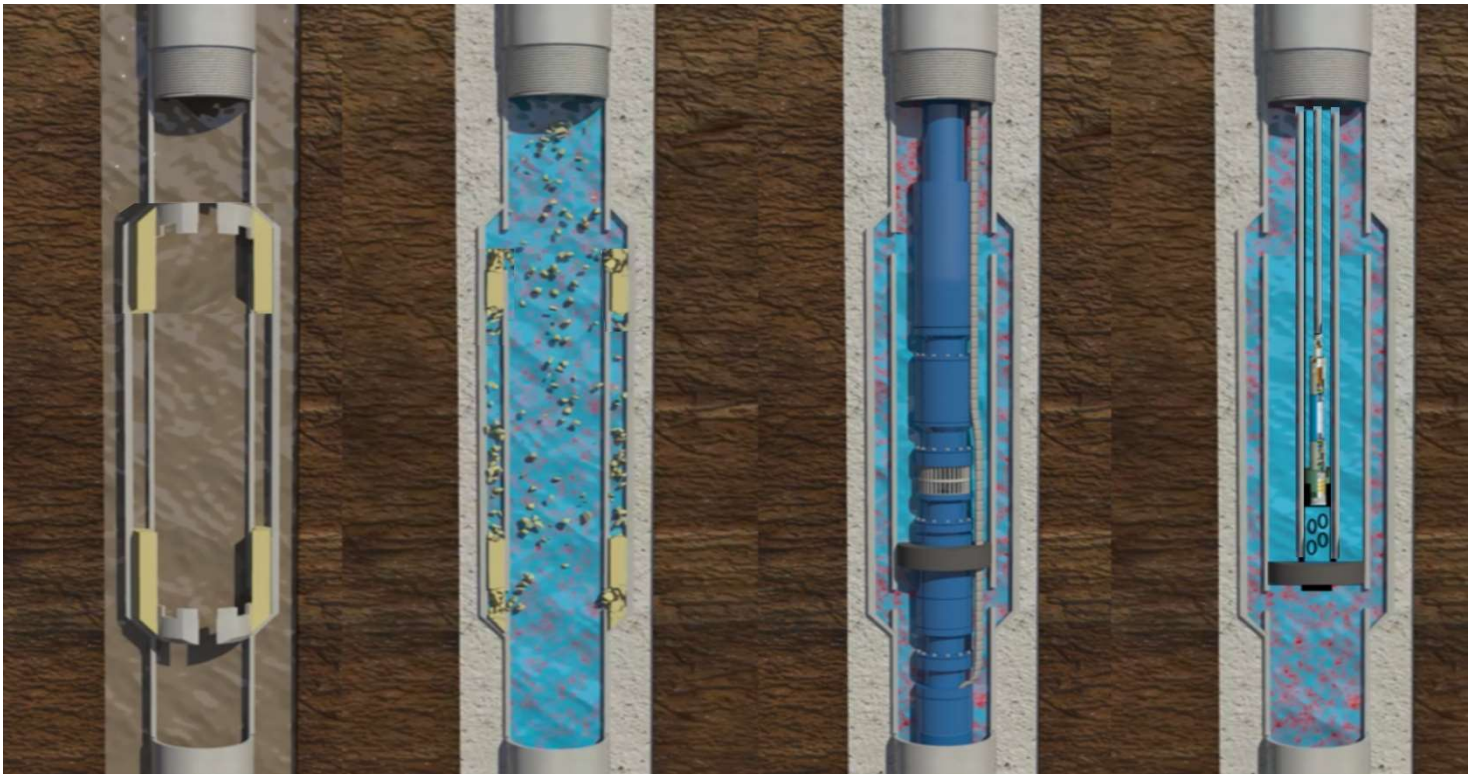
CASING GAS SEPARATOR



Run In Hole | *Sleeves Dissolve* | *CGS+ESP* | *CGS +Rod Pump*

Overview

The Casing Gas Separator (CGS) is a new production efficiency altering tool that vastly improves gas handling by doubling separation capacity in artificially lifted wells. This patented tool is easy to run, low-risk, and non-disruptive to existing drilling and completion practices.

The CGS is designed as a system to adapt to multiple lift forms and greatly improve the peak performance envelope, while simultaneously reducing costly interventions, operating expenses, and down time. All this is achieved without additional intervention processes or costs.

Benefits

- Efficient application of artificial lift much earlier in well life and in far higher than normally feasible gas-to-liquid or gas-to-oil ratios
- Leads to higher total production volumes
- Fits any form of artificial lift and provides "route-around" for all gas
    - Works as an integrated shroud as part of casing and/or as a huge diverter separator
- Absolutely no changes/additions to drilling, completion, or safety procedures

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ABOUT BLACKJACK

BlackJack's inspiration was sparked through working daily in today's challenging unconventional plays. Dissatisfied with a lack of quality options available to solve the serious production challenges, the company set out to create their own answer – the CGS – providing a major step-change in artificial lift and production optimization.

Our Mission – Revolutionize horizontal well production through the application of reliable and effectively engineered solutions.

Our Vision – Provide a major impact on the oil and gas industry by vastly improving production efficiencies.

Operations

The CGS is run as part of the casing string into a newly drilled well. The tool is commonly placed at the kickoff point, but can be run lower and set in a tangent if desired. The CGS is cemented in place for the life of the well.

Completions and flowback are conducted as designed, without any changes to normal operations. The CGS has a full bore inside diameter to match the rest of the casing in the well. There are no sleeves to shift or profiles to mill out.

Once the well is placed on artificial lift, such as an electric submersible pump (ESP) or rod pump, a lift-specific isolation tool is run and set to generate the desired flowpath.

Any form of lift can be adapted to work with the CGS simply by adding one of our lift-specific isolation tools to the string. The result is the most prolific and flexible gas separation technology designed for horizontal wells.

Example

New wells with an ESP can expect a 10-15% increase in fluid production output over the first 12 months plus reductions in failures/downtime – a HUGE increase on investment returns

- A well that would cumulatively produce 200,000 barrels of oil in the first 12 months may feasibly recover an incremental 20-30,000 barrels of oil in the same timeframe
- That could result in an additional $1-1.5 million (estimate) in recovery through improving the peak performance envelope, as well as reducing lift failures, associated downtime, and deferred production value
- Benefits of improved separation capacity and quality are then maintained through the well's entire lifecycle

Specifications

Common Sizes: (additional sizes available)

- 7"x5-1/2" mates to 5-1/2" longstrings
  - Increases max separation capacity from ~600 bfpd to ~1200 bfpd, a 100% increase
- 7-5/8"x 5.5" mates to 5-1/2" longstrings
  - Increases max separation capacity from ~600 bfpd to ~1600 bfpd, a 167% increase
- 8-5/8"x 7" mates to 7"x 4-1/2" (and other variations)
  - Increases max separation capacity from ~1200 bfpd to ~2300 bfpd, a 92% increase

Unique features:

- ID of tool matches casing ID/Drift
- Customizable dissolvable sleeves
- Compatible with multiple lift types

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