VERTEX

1-844-7VERTEX (783-7839)

STABLE FOAM

Typically used in oil well servicing in connection with drilling or production rigs, snubbing units or any pipe handling equipment, stable foam is now utilized safely and efficiently in a wide range of industry applications. With stable foam's low density and high viscosity, it has proven to be an efficient method of removing solids including sand, cement, pyrite balls, coal and rubber from producing wells; replacing the need for bailing.

Adapted to meet your needs, stable foam is made on-site as needed and is adjusted by modifying the gas and liquid rates, foam injection pressure and back pressure. With the addition of supplemental chemicals, stable foam is even capable of neutralizing token amounts of hydrogen sulfide. This gas is then confined within the foam and is slowly released and safely disbanded from the foam in the return tanks. This process demonstrates stable foam's exceptional safety capabilities, in addition to having no recorded incidence of downhole or surface fire.

Services

- Coring, Milling & Fishing
- Liner Running & Recovery
- Gravel Packing
- Well Stimulation
- Lifting Fluid Off Gas Wells

Stable Foam Cleanouts:

- Horizontal Wells
- Frac Wells
- Disposal Wells
- Foam Hammer Drilling
- N_2 Foam Cleanouts
- High Temperature Foam Cleanouts
- Gas Well
- Well Blow Downs

Drilling Applications:

- Deepening Surface Hole Drilling
- Removal of Debris
- Running & Pulling Liners

The Use of Stable Foam

The successful application of foam as a circulating fluid is relatively new. The industry has long recognized the need for a low damage circulating fluid and has used various fluid systems to minimize formation damage. Foams low density and high viscosity at low shear rates make it exceptionally useful as a circulating medium in low pressure reservoirs. These properties minimize fluid loss to the formation and diminish required annular velocities yet provide high lifting capability at the lowest possible circulating pressures.

Exceptional Safety Record

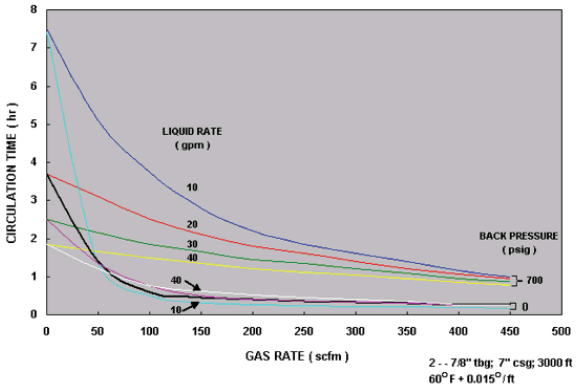
Stable foam circulation has an exceptional safety record with no incidence of downhole or surface fire reported. This record can be accredited to:

- Very little foam (air) enters the hydrocarbon bearing zones because of the low pressure gradients and viscosity displayed by foam.
- Accelerated clean-out and drilling rates diminish the time that foam (air) is in contact with the hydrocarbon bearing formations.
- The gaseous phase in a foam is encapsulated in a film of liquid and any realistic amount of formation gas is immersed into the bubble.

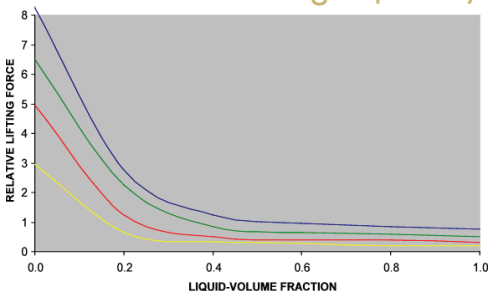
At high pressures, nitrogen or other non-oxidizing gas can be implemented for superior safety if crude oil or flammable solvents are present in the well.

Technical Data

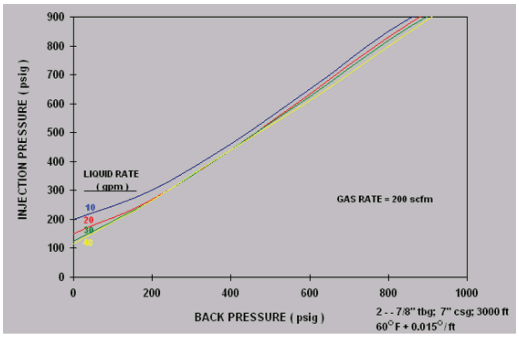
Circulation Time



Lifting Capability



General Trend In Injection Pressure (Back Pressure)



General Trend In Bottom Hole Pressure (Back Pressure)