

Marcellus Bio Control using the **SSBromtm**

An Economic Analysis

A typical hydrofracture procedure requires 300,000 gallons of hydrofracture water per day over a 10 to 15 day period. This water must be treated to prevent growth of formation plugging microorganisms. Typically, toxic chemical biocides such as glutaraldehyde and dibromo nitrilopropionamide (DBNPA) are used to kill the microorganisms. Of course, these products present a risk of aquifer contamination and are a toxic spill danger during transport, storage, and use.



Looking at the economics of replacing a typical chemical biocide, DBNPA, on a hydrofracture procedure using 12 stages with 300,000 gallons of water per stage, we see that 1,656 pounds of 20% DBNPA is required which at a typical cost of \$4.50/lb results in a chemical cost of \$7,452.

Installation of four (4) PCT Model 5000 **SSBrom** units would be needed to provide biocide treatment for 300,000 gallons of hydrofracture water on a daily basis at a cost of \$12,800, giving a payback on the equipment of less than two (2) hydrofracture procedures.

Please give us a call to explore our patent pending technology for treatment and recycle of hydrofracture flowback water and use of the **SSBrom** for microorganism control during hydrofracture procedures.

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The SSBrom is patent pending and is manufactured in USEPA registered facility 58616-1-PA