



• T E C H N I C A L D A T A

LITHO-BAC™

SCALE CONTROL

General Description

Litho-Bac™ is a proprietary combination of natural, facultative anaerobic bacteria used in oil well operations to inhibit calcium carbonate scale formation. **Litho-Bac** has some corrosion inhibition properties. Scale formation is inhibited through **Litho-Bac's** metabolic by-products, including alcohols, ketones, organic acids, and biosurfactants. **Litho-Bac** also has a limited ability to disperse, dissolve, and prevent paraffin deposition.

Application of **Litho-Bac** protects the formation face, as well as downhole surface equipment from scale deposition by sequestering and chelating major cations, such as calcium, magnesium, and barium. Some by-products of metabolism, the ketones and organic acids, are chelating agents that can inhibit the scale crystallization process. This is accomplished by bonding with the cation and preventing it from bonding with the anion to form an insoluble scale. This is similar to the process by which chemical inhibitors work. **Litho-Bac** further protects equipment with biosurfactants that remove previously deposited solids, which cause underdeposit corrosion.

Product Specifications

Color	Light pink to tan
pH	6.5-8
Weight per gallon	8.51 lbs.
Specific gravity	1.02
Freeze point	32° F
Viscosity	1.30 cps - 60° F
Odor	Mild organic

Application

Litho-Bac comes as a ready-to-use liquid formulation and can be introduced to the well by batch or squeeze treatments. Batch treatments usually involve the product being applied to the annulus and flushed with clean lease or KCL water. For optimum performance, it is recommended that the well be shut in for one to three days after treatment; however, this is not mandatory.

Treatment begins with an inoculation to establish the bacterial population of the well system. Thereafter, at predetermined intervals, maintenance doses of **Litho-Bac** can be added to maintain the colony of bacteria.

Squeeze treatment applications are a function of fluid production, porosity, perforation interval, and desired depth of penetration. The well is shut in for three to seven days.

Handling and Safety

*Litho-Bac meets EPA requirements for release into the environment. Special clothing or equipment are not required for handling Litho-Bac. Routine sanitary hygiene practices should be observed.**

*MSDS Available upon request.