

## MC FA-4002 Steadies Flow on Liquid Slugging Gas Well

Foaming Application Eliminates Operator Intervention and Increase Production 37%

### BACKGROUND

Well continued to flow, however, flow pattern indicated the well was in slug flow production. Liquid production yields 3 to 5 m3d water and 2 to 5 m3d condensate with minimal gas flow to the surface.

### ISSUES

A well in the Northwest Canada region was yielding production decline due to partial downhole liquid loading. Well loading up and operators can't keep flow steady.

### ANALYSIS

Utilizing the FAL (Foam Assisted Lift) process the downhole complete design was studied and several liquid foaming agents capable of removing both water and condensate from the wellbore were tested. Test conclusions indicate that Multi-Chem's MC FA-4002 provided excellent foam height and half life at high percentages of condensate.

### RESOLUTION

MC FA-4002 was applied via continuous annular injection at a rate of 4 liters per day. The rate was optimized at 5 liters per day and steady flow was achieved.

### DELIVERED VALUE

The candidate well continues to flow with an incremental gas rate 37% higher than when in slug flow. Well continues to flow steady with no down time or operator intervention required.

Multi-Chem warrants to purchaser, but no third parties or others, the specifications for the product shall fall within a generally recognized range for typical physical properties established by Multi-Chem when the product departs Multi-Chem's point of origin and that any services shall only be performed in accordance with applicable written work documents. Purchaser agrees that Multi-Chem will give purchaser the benefit of Multi-Chem's professional judgment in making interpretations of data, but does not guarantee the accuracy or correctness of such interpretations. Multi-Chem's recommendations contained herein are advisory only and without representations as to the results. NO ORAL OR WRITTEN INFORMATION OR ADVICE GIVEN BY MULTI-CHEM SHALL CREATE A WARRANTY OR IN ANY WAY INCREASE THE SCOPE OF THE WARRANTY CONTAINED HEREIN. EXCEPT AS OTHERWISE SET FORTH HEREIN, THE PRODUCTS AND SERVICES ARE "AS IS" AND MULTI-CHEM MAKES NO OTHER WARRANTY OR GUARANTEE OF ANY KIND WHATSOEVER, EXPRESS OR IMPLIED, INCLUDING NO IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. PURCHASER AGREES THAT MULTI-CHEM SHALL NOT BE LIABLE FOR ANY INDIRECT, SPECIAL, PUNITIVE, EXEMPLARY OR CONSEQUENTIAL DAMAGES OR LOSSES FROM ANY CAUSE WHATSOEVER INCLUDING BUT NOT LIMITED TO NEGLIGENCE OR GROSS NEGLIGENCE.

#### Global Technology Center

World Houston International Business Center  
15865 International Plaza Drive, Suite 200  
Houston, Texas 77032 USA

(800) 805 9178  
(325) 223 6200  
(325) 942 7500 FAX

[www.multichem.com](http://www.multichem.com)

