| CASE HISTORY |

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MC FA-4844 Pre-Swab Foaming Agent Treatment

Foamer Additive Pays Big Dividends for Operator

BACKGROUND

Multi-Chem was contacted and asked to offer recommendations to control field operating costs due to liquid loading. Foaming agent was utilized in conjuction with swab rigs in order to unload effected wells quickly thus reducing overall swabbing cost.

ISSUES

Reservoir pressure is very low in coalbed methane wells being produced within this region fo Canada. Each well could possibly have hundreds of meters of perforated interval. The well liquid loads and swab rigs are utilized throughout the field to control liquid liquid and maintain gas flow to the surface. Wells have no tubing; therefore, most are completed with 4.5" casing.

ANALYSIS

MC FA-4844 is a weighted foamer as it is heavier than the water in the well bore and mixes readily in the wellbore. After initial flow treatments following batch applications, it was noted that the foaming agent was adequately dispersed into the water yielding excellent foam quality. Prior to the use of foaming agent, the swab rigs were only able to remove approximately 1/3 of the liquid from the wellbore with the rest migrating to the formation. The use of liquid foaming agent has enabled the well to be totally unloaded during the process. Normal application requires approximately 24 hours shut in to achieve optimum results.

RESOLUTION

The wells receiving pre-treatment of foaming agent prior to swabbing yielded two to three times the incremental gas flow to the surface and extended the flow rate dramtically between swabbing cycles. This is a result of the foamer laden fluid moving freely from the formation during the swabbing process which allows the well to be totally unloaded.

DELIVERED VALUE

Data gathered during the trial clearly shows the success of this program between the foaming agent added wells opposed to the wells without the added foaming agent in the wellbore.

Cost Analysis:
Swabbing unit on average: $700 / well
Foaming agent per application: ~$100

By extending the treatment intervals to twice as long and the increased gas of 2 decs/day yields an average increase net return to the customer of approximately $12,000 in incremental gas increase and swab unit cost reductions per well.

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