

Water management strategy improves tight gas recovery

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A water management strategy of proactively reducing liquid loading has increased both production rates and gas recovery from multilayered, tight Cotton Valley sands. This water management strategy is central to an infill-drilling program that employs aggressive approaches for water removal. In producing tight gas sands, it is important to delay the onset of liquid loading so that wells need to be designed to enhance liquid removal. It also is important for one to recognize as early as possible when liquid holdup occurs in a well and then to respond quickly with counter measures.



The benefit from an aggressive liquid management program is not only the removal of the hydrostatic head but also the removal of fluids from the fracture system. Liquid loading in gas wells impedes production rates and reserve recovery. Fracture dehydration encourages stratification of gas and liquids within the fracture. Many companies go to great lengths to design and pump expensive fracture treatments.

That effort can be partially negated in fields like Bethany East, if thoughtful production management practices are not employed.

The use of the **reciprocal productivity index** proved beneficial for managing the Bethany East producing operations. The use of the reciprocal productivity index proved beneficial for managing the Bethany East producing operations. Liquid management improvements readily justify data acquisition costs. It is important to have an aggressive fluid management program to maximize cash flow from a well.