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Extreme Overbalance Perforating and One-Trip Perforate and Gravel Pack-Combination of Two Techniques for Successful High Rate Gas Well Completions in the Ha'py Field

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Abstract

The Extreme Overbalanced Perforating (EOB) technique has been successfully applied in a variety of locations around the world both in 'hard rock' and 'soft rock' formations. In certain applications, it offers definite advantages over other perforating techniques. One-Trip Perforating and Gravel Pack technology also has been successfully applied at various locations with definite advantages over other 'soft rock' cased hole completion techniques. Prior to the completion of three wells in the Ha'py field, these two technologies had never been applied concurrently.

This paper describes the teamwork that was required between the operating company and the service providers to properly combine these methods and ensure their successful application in the field. The authors outline some of the obstacles encountered and describe how the tools and procedures were designed for success.

During the three well completions in the Ha'py field, some problems were encountered that required modifications to operations. The lessons learned from these problems and how they were applied to subsequent operations are also addressed.