

Proportional Integrated Evaluation A Technique for Evaluating Multiple, Deltaic, Red Fork Sands in Competitive Reservoirs

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Increased development drilling in multiple-zone Red Fork reservoirs has led to 12+ gas wells per section in some Custer and Roger Mills fields. Geologic and reserve evaluations become more difficult and time intensive as the newer wells complicate two of the parameters that are used in volumetric calculations. These are the current reservoir pressure and the realistic drainage area. Statistically, a Red Fork reservoir that contains a total of six individual sands with an average of three sands per well, would require 20 maps to define all the possible sand unit combinations. To improve the overall evaluation of these complex reservoirs, one must incorporate other parameters into the study. These would include the character of the HC shows, the magnitude of the drilling breaks, detailed S.P., and G.R. log responses plus an estimation of the pressure and reserve depletion from the older, offsetting wells.

The "Proportional Integrated Evaluation" approach incorporates some relatively simple graphic techniques to facilitate a better understanding of the overall reservoir. This semi-quantitative technique does not replace conventional isopach mapping, but is a correlary to the more conventional methods.