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Kan Wu. *Robust Analysis of Different Models for Fracture Propagation in Formations with
Bedlayers.*

Because of the development of hydraulic fracturing in unconventional reservoirs and the singularity issues existing in the numerical computation, accurately modeling the propagation of the hydraulic fractures has been both a necessity and big challenge for the researchers and companies. Among all the techniques for fracture propagation modeling, equilibrium height growth model is the most sufficient methods due to the balance of accuracy and computation efficiency. In this study, three different equilibrium height growth models (Analytical Method, Reference Pressure Method and Direct Minimum Method) are rigorously analyzed and compared for a three layer reservoir zone. Their advantages and disadvantages are summarized and illustrated. For the best knowledge of the authors, this is the first time all these three methods are analyzed and compared so rigorously. The results in this study will provide the researchers a good reference to decide which method is applied. (Received September 13, 2019)