

Connecting the Worlds of Hydraulic Fracturing and Production Evaluation

Bart Vos¹

¹Fenix Delft

ABSTRACT

Hydraulic fracturing is the most successful method of production enhancement developed by the petroleum industry. Unfortunately, people involved in hydraulic fracturing often tend to focus on getting the proppant in the ground, an accomplishment by itself in many places, and forget the final target of production enhancement. To make matters worse, many companies leave the evaluation of the resulting performance to other people than the people who evaluated the fracture treatment.

This presentation will describe in detail the problems that result from this practice, to make clear what the issue is and demonstrate the value of requiring a consistent evaluation of both the hydraulic fracturing injection data, with its own uncertainties, and the production data, with its own uncertainties. A consistent integrated evaluation results in better understanding of the reservoir behavior, the fracture performance and the production forecast.

Several case histories will be shown, illustrating the benefits of this workflow. We will also discuss the uncertainties that remain and their root causes, even after applying such an integrated workflow.