

SPEE Monograph 5: A work in progress

Monograph 5 is still a work in progress despite anticipation by the Society of Petroleum Evaluation Engineers working committee two years ago for “final publication” in 2020. The monograph will focus on recommended practice guidelines for constructing type well profiles (TWP).

Lately, the news media, investors and others have criticized E&P companies in the Permian Basin and other unconventional plays for overly optimistic production forecasts derived from TWPs.

In October, an SPEE Denver meeting video presentation at <https://vimeo.com/473489413> provided updates, including discovery of “significant error” using a simple, common approach to TWPs. The committee found that averaging individual monthly rates and dividing by the producing well count results in unsubstantiated, inflated EURs.

A simple adjustment to the common approach, namely

implementing a constant well count, leads to more reliable TWPs. The evaluator starts by including production rates over the full-life cycle — historical plus projected out to a technical limit — of all underlying producing wells. Then, if necessary, the evaluator includes additional “zero” months to extend the life of individual wells after reaching the end of their forecasts, including any shut-in or abandoned wells that are part of the sample set.

That results in a group of wells with the same lifespan, and when normalized to a common point in time, a TWP is generated based on a constant well count. This process improves the match between the EUR of the TWP and the average of the well samples, as well as the overall rate-time profile.

The presentation has numerous charts that illustrate the approaches.