DecisionSpace® Production Engineering

FORECASTING IN UNCONVENTIONAL RESERVOIRS

OVERVIEW
The DecisionSpace® Production Engineering platform is designed to help maximize production, increase recovery, and improve efficiency by combining advanced production engineering tools with cross-domain workflows for more complete asset understanding. This innovative technology enables managers, petroleum engineers, and geoscientists to be more productive and to pinpoint problem wells quickly in order to deliver better production outcomes.

FORECASTING CAPABILITIES
This software technology enables you to forecast potential asset production more accurately than with traditional methods for better recovery strategies and more efficient completions. More than 50 techniques are available to suit unique field characteristics, including decline curve analysis (DCA), rate transient analysis (RTA), type curve analysis, and differentiated techniques for unconventional assets.

RECOMMENDED USE CASE
The platform’s forecasting and analysis capabilities represent how Halliburton Landmark offers solutions to help you deliver on your business strategies. Using DecisionSpace Production Engineering, reservoir engineers can now increase speed and accuracy of unconventional reserve forecasting with advanced calculation methods, exponential decline, and other experienced-based methods to forecast production and recovery reserves.

Examples of advanced forecasting techniques in the DecisionSpace® Production Engineering platform, such as the Fetkovich, Blasingame, Agarwal, and Duong models of analysis
CHALLENGES

» Traditional Arps decline relations can often yield ambiguous results in low-permeability and ultra-low-permeability reservoirs.
» Some methods can result in significant overestimates of reserves.
» Complex influences of geology, varying rates and pressure drops, and limited understanding of fluid flow can make forecasting challenging.
» Developmental characteristics and behaviors in shales and tight reserves continue to evolve.
» Extensive decline analysis processes can hinder fast and accurate decision making.

SOLUTIONS

» Using multiple forecasting methods, both empirical and analytical, to get an accurate estimated ultimate recovery (EUR) calculation.
» Comparing and contrasting different forecasting methods backed by numerous libraries of decline techniques.
» Applying different types of advanced decline methods with speed, agility, and flexibility.
» Advanced techniques including well test analysis methods, fracture diagnosis, permeability, material balance, and volumetric methods to calculate geological reserves.