

November 2020 – CSUR Technical Webinar

Case Study - A Modern Permian RTA Workflow

November 2020's Technical Program kicked off with an energetic and engaging talk by James Ewert from IHS Markit (Houston). James is an Associate Director & Technical Advisor at his organization. The focus of the presentation was to provide a generalized qualitative & quantitative workflow using a production data analysis tool, such as Harmony, to gain better understanding of the reservoir flow parameters & extent, history match and also to be able to extract realistic forecasts for wells that produce high water cuts.

Utilizing on his work experience and expertise with numerous resource basins from around the world, including many of the North American conventional & unconventional plays, the speaker suggested a 4-step workflow that incorporates the following: diagnostics, interpretation, modeling and forecasting. The speaker went on to point out some of the intricacies within each of the steps, including potential re-adjustments to the interpretation & modeling aspects, for a valid and representative history match of the well's effluent. He also stressed that in order to maintain the integrity of the work and to honor the material balance piece, only formation water recoveries (not frac flowback water) should be used in the analysis.

To provide additional step-by-step illustration of his workflow, James conducted a live demo for a single well scenario using the Harmony platform and data from a well in the Delaware Basin (Permian) in Texas. This demonstration provided the attendees with supplementary guidance on navigating through the general workflow suggested by the presenter.

Finally, the individual single-well history matches were then migrated into a single multi-well analysis to provide a more thorough reservoir model, taking into account the aggregate production from each of the wells. This type of numerical modeling is a much more powerful & dynamic analysis as it allows for a field-wide study of the reservoir.

Summary

Wells that produce high water cuts offer a particularly daunting challenge when applying RTA (Rate Transient Analysis). Often times the saturations obtained from internal sources simply does not match what is being seen in the raw production data. This webinar will introduce an augmented 2-part single well workflow that utilizes both the Multiphase Flowing Material Balance and Scenario functionality of Harmony Enterprise to converge on a Numerical model history match. Once all individual well models are matched a workflow is presented to get to migrate multiple single well analyses into a single multiwell analysis in a systematic fashion.

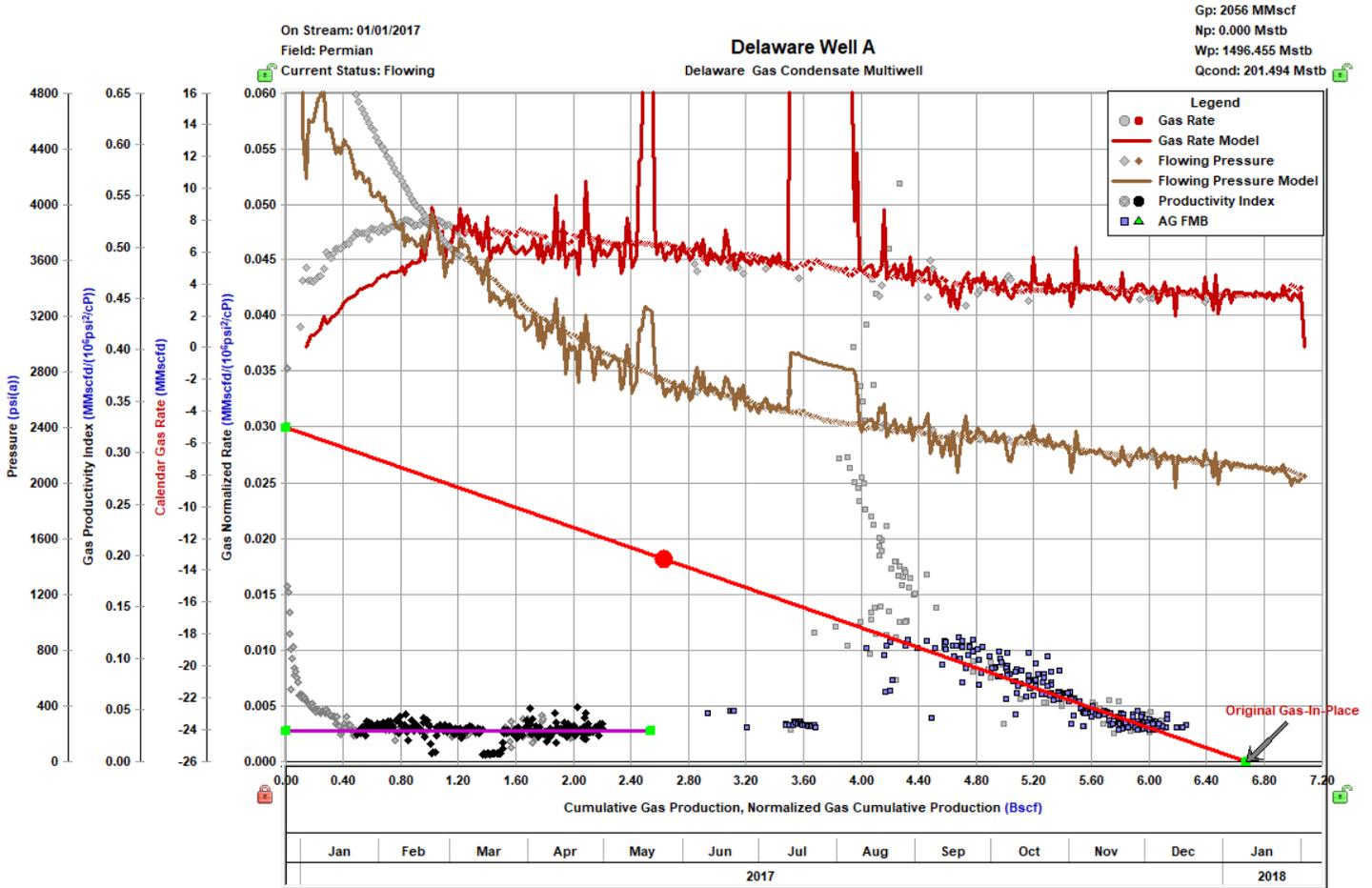
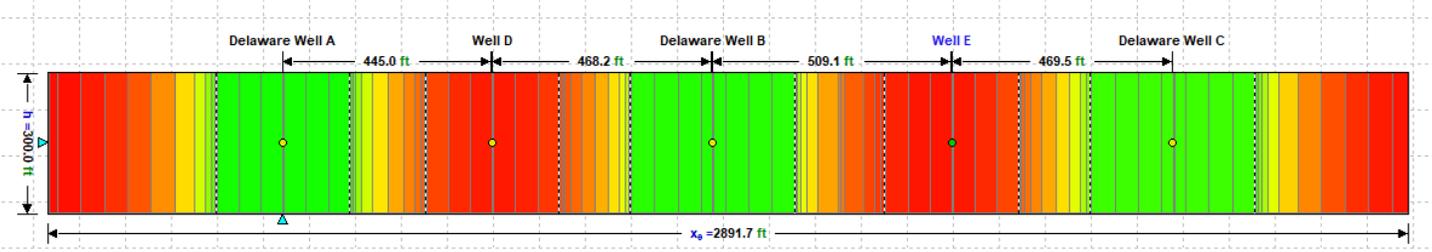


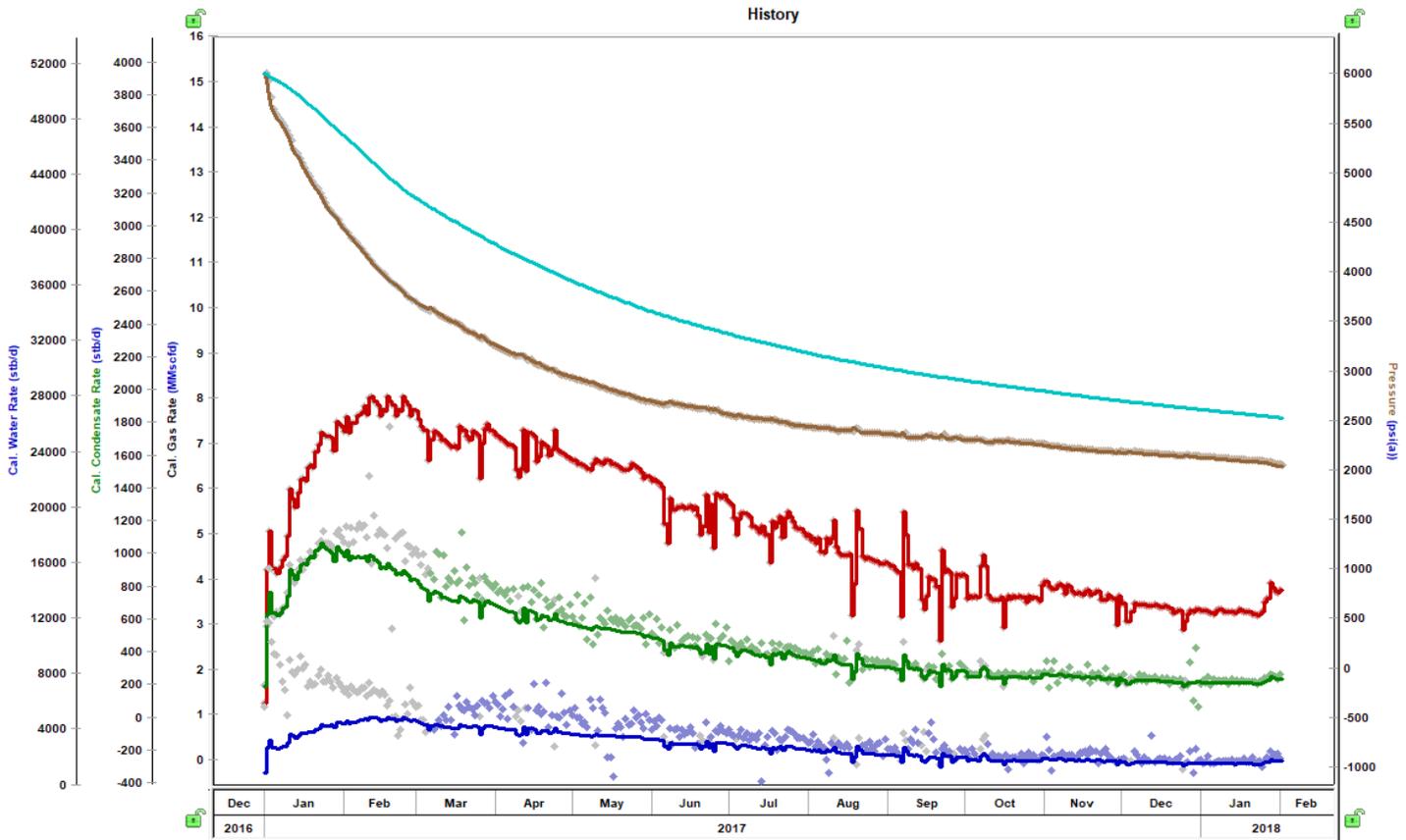
TECHNICAL
WEBINAR
SERIES



"CASE STUDY - A MODERN PERMIAN
RTA WORKFLOW"

By James Ewert, Associate Director,
Technical Advisor - IHS Markit.





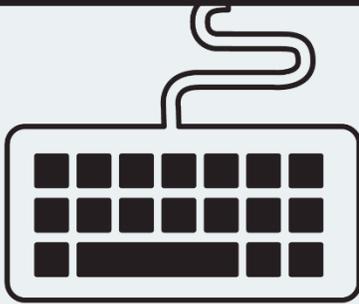
PRESENTER: James Ewert, Associate Director, Technical Advisor - IHS Markit. (James.Ewert@ihsmarket.com)

James Ewert is a technical expert and instructor of Rate Transient Analysis for IHS Markit. He has led numerous courses in both Canada and the United States for a range of clients, from major producers to consulting firms. James has become most well-known for his research and workflow development in analyzing high water cut Permian wells using multiphase methods. He joined the company as part of the 2013 acquisition of Fekete Associates. Previously he served as an oil and gas operations officer for the Yukon Territorial Government, ensuring fulfillment of facility and reservoir engineering functions mandated by the Yukon Oil and Gas Act. James earned his bachelor's degree in engineering from Carleton University, Canada, and his master's degree in engineering from the Harold Vance department of Petroleum Engineering at Texas A&M, United States.



"Case Study - A Modern Permian RTA Workflow"

By James Ewert, Associate Director,
Technical Advisor - IHS Markit,



Sponsored by



Sign Up Now !!

For more Information and Registration visit:
<https://www.csur.com/events/>