

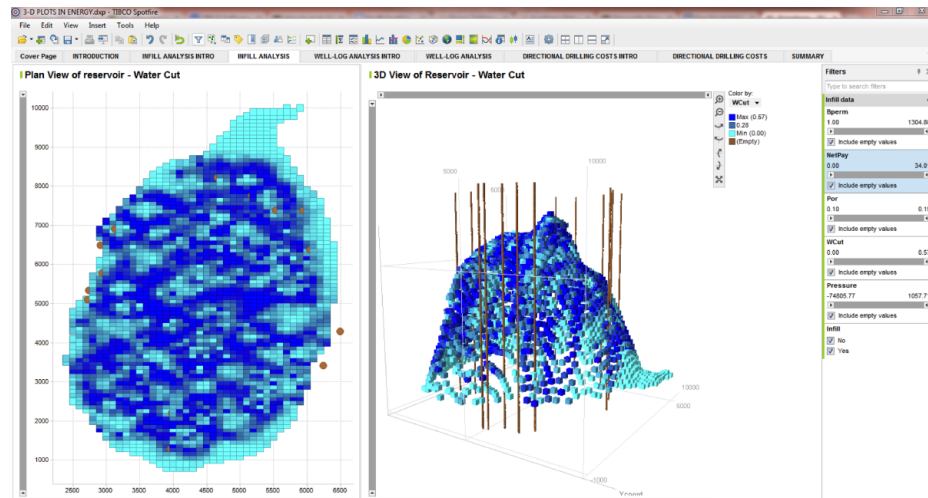
# TIBCO Spotfire for Well Engineering and Drilling Operations

Elapsed time from gaining a lease to spud to first oil is always the challenge. When drilling needs to ramp up, quickly acquiring the necessary equipment and resources, as well as keeping non-productive time (NPT) to a minimum, is one part. NPT must be carefully monitored, and well planning for unconventional reservoirs needs sophisticated analysis. In short, engineers are being asked to execute faster while optimizing well plans and drilling operations based on the latest information.

## CHALLENGES TO WELL ENGINEERING

To plan and execute better than the competition and manage the profitability of assets, firms are looking for analytic tools to help make sense of various data types coming from multiple source systems. Additionally, to reduce NPT and mitigate costs, drillers need systems that will help them analyze failures, learn from previous issues, and predict future events.

NPT can have many root causes and identifying these requires looking at all the available data, mashing it together, and trying to understand patterns by activity, stage, equipment, and other factors. In some instances data from surface and sub-surface equipment should be monitored in real time, so that NPT incidents can be proactively avoided.



Closely related to NPT management is determining the appropriate specifications for equipment — size, reliability, suitability to geological conditions — that also fit within the acceptable cost profile for the well. Understanding these factors can help improve decision-making for replace and maintenance strategies, as well as help control AFEs.

## WHY SPOTFIRE?

TIBCO Spotfire® helps well engineers the world over analyze data faster. The Spotfire intuitive, interactive, analytic platform enables them to make better decisions across diverse and challenging environments. Because Spotfire uniquely allows you to capture all the data, structured and unstructured, at rest and in motion, it allows the deepest possible investigation of issues behind NPT and reliability. With Spotfire, drilling and completion engineers can:

- Combine data from a number of sources to establish a big picture view of asset, area, and individual well or rig performance, and then share their findings across the organization or with service providers.
- Make more informed decisions on equipment and completion techniques by mining a rich history of data to spot correlations between equipment, completions, well performance, and production results.
- Compare drill bit performance against metrics from vendors to determine the most efficient drill bit for specific conditions.
- Reduce NPT by analyzing a variety of data to determine root cause of equipment failure, crew delays, or well bore issues, and take corrective action to reduce cost and time overruns.
- Optimize future workover plans by evaluating large and diverse data sets to identify the most successful workover methods by region or geologic condition.



## BEYOND DRILLING OPERATIONS

Spotfire is helping energy companies worldwide optimize drilling operations. It is also used extensively across the industry, from production optimization, energy trading, and portfolio and capital planning to health and safety analytics. TIBCO Spotfire is the only data discovery platform that helps users of all kinds improve decision-making by using analytics to generate and share critical business insight and take action on their discoveries.



**TIBCO Spotfire**  
 281 Summer Street,  
 3rd Floor  
 Boston, MA 02210  
 +1 866-240-0491 US  
 +44-800-520-0443 EUR  
 www.tibco.com  
 spotfire.tibco.com

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