RM27

Uncertainty Management Planning: Observations, Lessons Learned and Best Practices from a Year On the Road

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SUMMARY
Abstract

The primary objectives of all Uncertainty Management Plans (UMPs) are to:

1) Identify and prioritize uncertainties which have the highest impact on the EUR and production rates for the asset or project and develop and execute work activities with the goal of resolving or reducing the range of uncertainty for any significant parameter or property.

2) Develop mitigation and contingency plans for those uncertainties which may not be able to be resolved or reduced through asset or project team work activities.

Understanding what the significant uncertainties are and addressing them early in the life of an asset or project can help achieve the goal of improved reservoir performance.

After a year’s worth of UMP Workshops from around the globe, a number of interesting observations have been made which have helped to derive a series of Lessons Learned and Best Practices for the reduction of uncertainty. Twelve workshops were conducted around the world over a range of assets and projects of varying size and scope. Curiously, there were recognizable similarities independent of asset or project size and scope, while in other cases, quite significant differences were recognized in apparently similar projects. These observations led to an understanding of how and why certain uncertainty management procedures were effective, while other procedures were less effective.

This presentation will focus on the examination of Lessons Learned and Best Practices for both assets and projects with considerations for multiple scales, fields, and reservoirs as well as subsurface and surface considerations. Without being fully aware of which uncertainty management practices are optimal, asset and project teams may not utilize time, money, and people in an effective manner with resulting reductions in EUR, production rates, and value.

Lessons Learned

1. There is much room for improvement when it comes to being "Decision-Driven" in our work.
2. Being "Decision-Driven" means knowing and understanding the decisions to be made before you do the work to enable the decisions to be made.
3. UMPs which exclude surface-related operational considerations are usually sub-optimal.
4. Asset and Project UMPs may be very different. It's important to know the difference.

Best Practices

1. Apply Uncertainty Management Planning as early as possible in each CPDEP Phase and/or whenever new information or technologies become available.
2. Determine the Key Focus Decisions for the asset or project.
3. Prioritize the uncertainties. Focus your work and plans on the uncertainties that can impact decisions (i.e. be Decision-Driven).
4. Develop mitigation and contingency plans for unresolvable uncertainties.

Challenges faced in the Project

1. Many project teams perform UMPs after the technical work has been done.
2. Integration of subsurface and surface disciplines is non-trivial.
3. Overcoming the notion of "We do it this way, because that's the way we've always done it."