



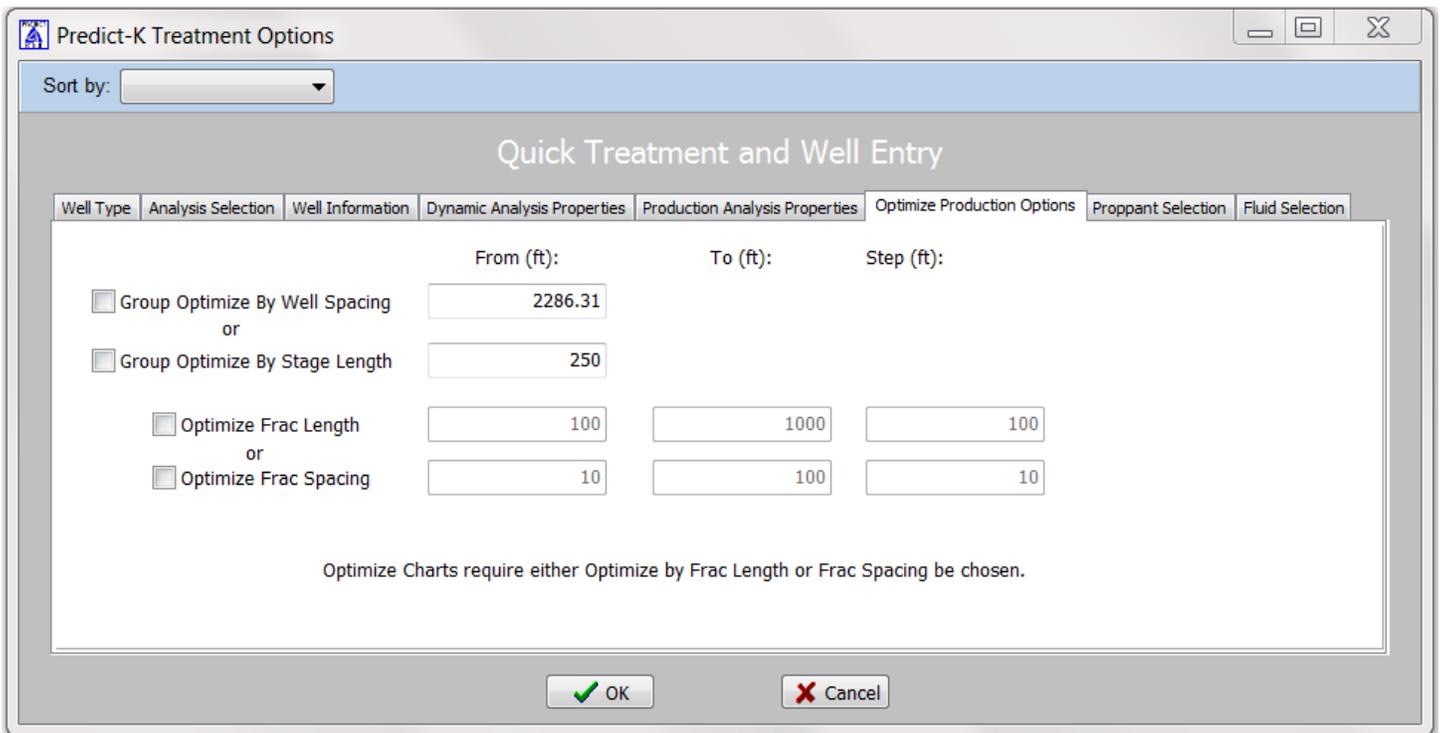
PREDICT-K “TIP OF THE MONTH”

Updated Optimization Options

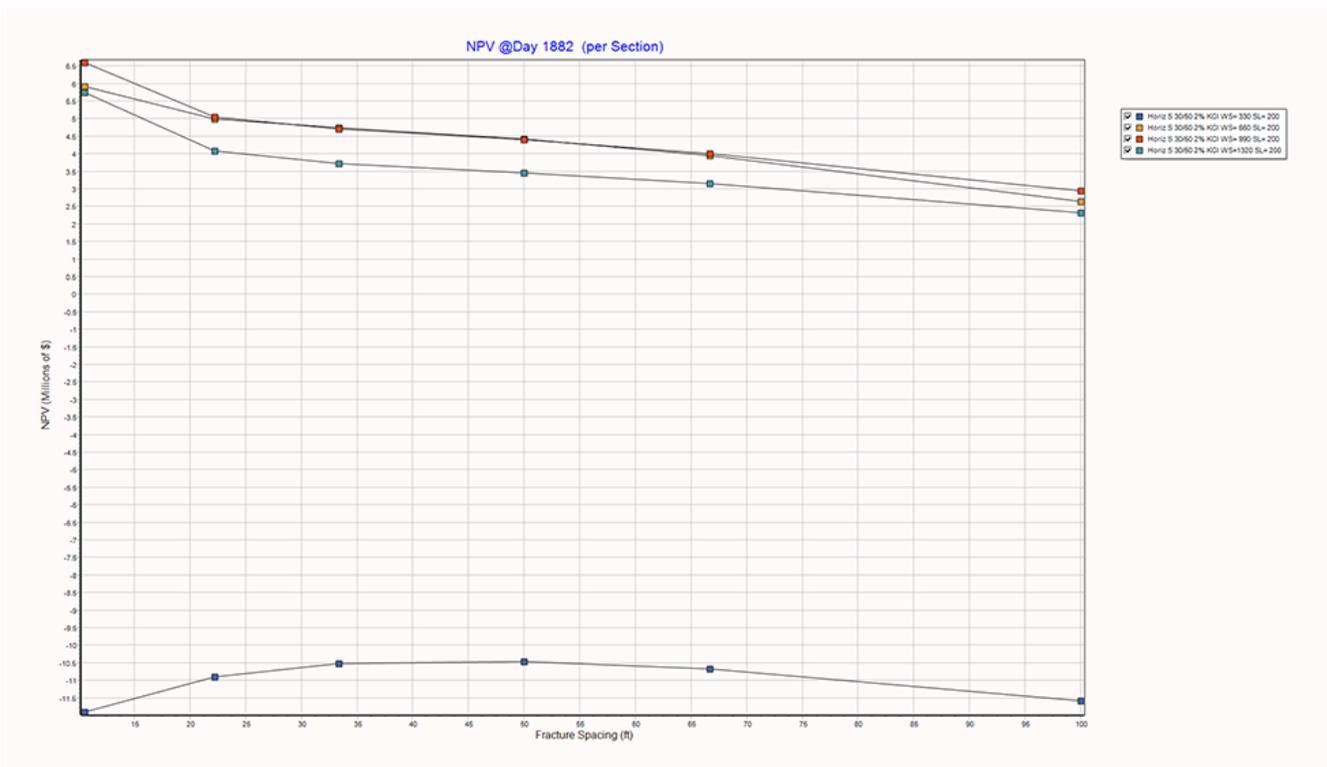
Continuing with the theme of highlighting the new changes to Predict-K in these tips, this month’s tip will cover the changes made to the optimize analysis workflow in Predict-K. When this analysis mode was first implemented, its purpose was to assist in determining the optimal propped fracture length when completing a vertical single stage well. As the industry shifted to a focus on horizontal completions, significant effort was spent updating the general production model while leaving the optimize mode specialized for its original purpose. In Predict-K 17.9, significant functionality was added to the optimize analysis mode, and the way it interacts with the production mode was also changed.

The second of these two changes is the simpler change to describe. In prior versions of Predict-K, the optimize mode was a completely independent mode with unique input requirements that was run separately from the other analysis modes. Now all calculations needed for the optimize mode are performed when you run the model in production analysis mode, and optimize mode simply displays the results for the various treatments in a different way focused on showing how those treatments differ.

The larger change to the optimize mode, the types of optimization variables that can be displayed, involves a much larger change to the inputs for Predict-K. The screenshot of the optimize tab of quick entry highlights how the optimize analysis mode is different. Treatments are now grouped according to well spacing or the length of the frac stages to create curves showing how the optimization variable, NPV or production, varies based on either frac length or frac spacing, the distance between created fractures on the lateral. Multiple treatments can still be compared that will have their own independent set of curves as well.



The plot below was shown at the Proppant Consortium meeting to demonstrate the changes to Predict-K. It shows the net present value per section for a variety of frac spacing options and well spacing options using 5 years of production. The plot indicates that one of the most critical considerations for this well scenario is ensuring that the project is not overcapitalized by placing the wells too close together. Being able to view the curves for multiple treatments and completions methods together will allow the user to determine which variables are most important to consider when optimizing and how a change in one design parameter may affect the optimal choice for another factor.



These Predict-K tips are emailed so they can be easily forwarded to others that may not be on the email distribution list. We hope you enjoy these tips and find them useful, but if you would like to be removed from this list please click the Unsubscribe link below. A new email will be created using your default email client. If the link does not work for you simply reply to this email with 'Unsubscribe' in the subject line and you will be removed from the list. If this email was forwarded to you and you would like to be added to the distribution list, please forward this email to Stimlab.Contact@corelab.com with 'Subscribe' in the subject line.

[Unsubscribe from Predict-K Tip of the Month](#)

To view the Predict-K Tip of the Month archive please go to: <http://www.corelab.com/stimlab/predictk-tip-of-the-month>

To view our Predict-K training videos main page please go to: <http://www.corelab.com/stimlab/training-videos>

Predict-K Training Videos (opens in YouTube):

1. [How to obtain your license for Predict-K and Proppant Manager](#)
2. [Predict-K Main Screen](#)
3. [Quick Entry](#)
4. [Predict-K General Structure](#)
5. [Creating a New Proppant Manager Database](#)
6. [Running the Proppant Manager Correlations](#)
7. [Exporting Proppant Manager Results to Predict-K](#)
8. [Baseline Conductivity](#) [Demonstration Base Project for Videos 8 - 10](#)
9. [Dynamic Conductivity](#)
10. [Production Analysis Overview](#)
11. [Adding Production Data to Predict-K](#) [Demonstration Base Project for Video 11](#) [Simulated Production Data Excel File](#)
12. [Matching Production Data](#)
13. [Changing Default Units](#)
14. [Treatment Options](#)