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## PREDICT-K “TIP OF THE MONTH”

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### Flow Control

Frequently when Predict-K users provide their files to gain support, I notice that a constant wellhead flow condition is being used to control production even though better data is available. Many users fail to input a more descriptive pressure history because of a lack of awareness of Predict-K features and how easily pressure information can be added. This task can be accomplished by changing the Flow Control under Model Parameters in Production Analysis Mode. By default, a constant surface pressure is used, which many users neglect to change.

Well Information	
Property	▼
Well name	New Well
Fluid type	gas
Well orientation	vertical
⊕ Reservoir Properties	
⊕ Well Properties	
⊖ Model Parameters	
— Total prod. period (days)	180
— Monthly well cost (\$)	0.0
— Total wellcost (\$)	0.0
— Gas price (\$/Mscf)	6
— Oil price (\$/STB)	55
— Annual discount rate (%)	20
— Maximum gas rate (Mscf/d)	10000
— Minimum gas rate (Mscf/d)	0
— Num of stress cycles	1
⊖ Flow control :	Const. WHP ▼
— Surface well pressure (psi)	800
— Time factor:	1.1
⊕ Fluid Properties	
⊕ Fracture Properties	

Five options are available for flow control in Predict-K: Constant wellhead pressure, constant bottomhole pressure, production wellhead pressure, production bottomhole pressure, and production % drawdown. For the constant options, the user simply inputs the desired constant value below the flow control selection. Under the production control options, values for the control variable can be input for the entire production history. These values are input in the Production Data tab based on cumulative days of production.

Production Data							
Time (days)	WHP (psi)	BHP (psi)	% Drawdown	Gas Rate (Mscf/d)	Oil Rate (STB/Day)	Water Rate (STB/Day)	Cum Prod (Mscf)

One important note is that true production data is not required to use this tab. A synthetic production history can be input that mimics the general production strategy of an operator's well. Using the production data tab is very easy. All of the available production pressures and rates can be pasted at one time directly from excel. The only requirement is that the order of the columns and unit selections are matched. Column order can be changed by simply dragging the columns and default units can be changed under preferences. Change units before pasting data. For more information on how to accomplish these two tasks, see the training videos at <http://corelab.com/stimlab/training-videos> or click on the links at the bottom of this tip.

By using a more representative flow control method, you will be able to match production results more easily and perform optimizations based on more realistic flow conditions. These changes will result in better Predict-K files and better decisions that have a larger impact on well results.

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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](#)

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