Business Requirements

# Identifying Best-Fit Type Curves

The objective of this activity is to create a representative P-50 type curve for a particular region or group of wells, or any other imaginable scenario.

* Create a “group” of wells using any (or all) of the following…
  + select wells on a map by drawing a selection lasso or rectangle (one shape at a time)
  + filter data using a combination of values and conditions for inclusion or exclusion for any or all the available columns
  + include or exclude a well from a group when viewing individual profile (either clicking the profile in aggregate mode, or through a button in individual mode)
  + import a list of unique well identifiers to define the group
* Save selected wells as a “group” – give it a name
* View existing groups, rename groups, delete groups
* When viewing groups…
  + add or remove wells from the group
  + overlay the type curve on top of production
* Export the P-50 type curve of the group either as…
  + three ARPS parameters, i.e. qi, Di, and b, or
  + a generated production profile, i.e. [9, 8, 7, …, 1], or both
* Import a financial type curve (FTC) in profile format, i.e. [9, 8, 7, …, 1] and associate with a group of wells. FTC can be overlaid in the same manner as a generated type curve.

**Note**: A group is technically a list of unique well identifiers, i.e. [W1, W2, W3, …, W9]

**Note**: The current individual profile does not include actual production.

# Probit Analysis

The objective of this feature is to support the generation of a best-fit type curve by generating a pseudo-probit curve to identify outlier wells using percentile values of total production.

* For the current selection of wells or group (see above), calculate the percentile values of total production (or EUR) per foot
  + EUR (or Production) per foot is calculated by dividing EUR or Total Production by the lateral length of the well for each data point.
* Plot total production and the percentile values on a scatter plot using semi-log axes
  + Percentile values are scaled on a logarithmic scale, while total production is plotted on a linear scale
  + Adjust the selection of wells within the group by including or excluding wells that lie outside the P10 – P90 range
* Add ONE nominal dimension to the probit plot at a time to group by dimension
* Select a well on the probit plot to move to individual well mode
* Change plot scales; i.e. both X and Y into Log and Linear

**Note**: Log scale that generates a straight line may not be possible with current technologies. i.e. equal tick spacing near the edges and the center. 1-2 = 40-50 = 50-60 = 98-99

# Statistical Analysis

This component provides support to decision making by showing preconfigured statistics about the overall data or current selection.

* Statistics include P1, P10, P50, P90, P99, Mean, Median, P10/P90

# Comparative analysis

* Save current workspace
  + Workspace includes global and app-level settings, current state of interface elements, well selection(s), and others as needed
* Load previous workspace when starting application
* Share workspace with other users