

## Transient Multiphase Flow Simulators



### Appendix C - Modeling Tools

#### Multiphase Flow Simulators

OLGA and Leda Flow are two of the most widely available commercial one-dimensional transient multiphase flow engineering simulators.... Without these commercial simulators, it would be impossible to develop deepwater fields. The fact that many such subsea developments produce oil and gas reliably is a testament to the accuracy of these simulators.

problem, i.e., the properties of the fluid flow only change along one dimension, namely along the length of the pipeline.

Over the last 40 years, through carefully designed experiments in large-scale multiphase flow loops and by gathering field data from multiphase production pipelines, the relationships required to accurately

#### OLGA

OLGA has a long history (30+ years) of enabling operating companies to design and develop multiphase production systems.

This version of OLGA is in my experience the most widely-used version in the industry today. Nearly all of the operating companies that use OLGA, rely on and accept the results from this software version for the design, development and operation of oil and gas fields around the world. This version of OLGA is referenced in this work to provide a basis of what is commonly accepted in the industry.

#### Ledaflow 1.2

Leda Flow is a product that was developed through more than 10 years of collaboration between ConocoPhillips, Total and SINTEF.

XMZX411-000043  
TREX 011683.0043