OPTIMIZING GAS FIELD PERFORMANCE FOR IMPROVING PRODUCTION RATES AND RESERVES, AND GAS FIELD COMPRESSION OPTIMIZATION

Workshop Description

This five (5) days workshop provides detailed discussions and hands-on training for optimizing gas fields, for improving production rates and reserves, and gas field compression optimization. This workshop will be ideal for professionals interested in learning the application of Integrated Asset Modeling (IAM) tools (MBAL, GAP and PROSPER) to gas fields, and also act as a refresher for professionals already involved in IAM, providing them with an opportunity to get their questions, related to the subject matter, answered by industry veterans in this field.

This workshop starts with an introduction to the Integrated Production Modeling (IPM) suite, followed by discussions of the use of PROSPER (Well Modeling and Design program) and MBAL (Reservoir Analytical Simulation program), and thereafter the use of GAP (Multiphase Network Optimization program) to build a gas field model and optimize the compression. Several hands-on problems are incorporated in the workshop for the attendees to gain hands-on experience in using the IAM tools.

WORKSHOP CONTENT

Introduction to Integrated Production Modeling (IPM) Suite
PVT Modeling in PROSPER
In-flow Performance and System Analysis Concept
IPR Modeling in PROSPER
Multiphase Flow Overview and Modeling in PROSPER
    Flow Regimes
    Liquid Loading
    Slugging
    Impact of Terrain and Elevation on Pressure Drop
System Performance Modeling and Sensitivity Analysis in PROSPER
    Non-Darcy Flow, Shot Density
    Gas-Condensate System, Tubing Size Sensitivity
VLP Curve Generation for MBAL and Simulation Models
Material Balance Concepts
    Material Balance Calculations using MBAL
    Estimation of OOIP and GIP using MBAL
Gas and Gas-Condensate System Modeling using MBAL
Production Forecasting using MBAL
Facility Modeling using GAP
Multi-phase Flow Behavior in Horizontal and Inclined Pipes
Linking GAP to Different Simulation Models
Gas Field Compression
Compressor Modeling using GAP
Compressor Size and Performance Optimization

In order to provide thorough training to the attendees, in this workshop, about two days are devoted to discussions and problems on PROSPER, about one day to discussions and problems on MBAL, and about two days to discussions and problems on GAP (including gas field compression optimization). At the end of training workshop, attendees will learn to: (1) Use the IAM tools to optimize the production and reserves of gas field assets (2) Optimize gas field compression using GAP, and (3) Use PROSPER, MBAL, and GAP programs to model gas fields.

Duration and Scope

This workshop is of five (5) days duration and discusses how to optimize gas fields using the Petroleum Experts' toolkit (MBAL, GAP and PROSPER). A lot of emphasis is given on discussing the use of GAP for optimizing gas field compression. A combination of technical discussions and class exercises will prepare the attendees to work with Petroleum Experts' toolkit based on previous field experiences, lessons learned,

Who Should Attend

This five (5) days workshop is custom-designed for senior managers, managers, senior engineers, and other professionals familiar with reservoir and production engineering, and interested in mastering IAM tools such as PROPSER, MBAL, and GAP for gas field performance optimization and gas compression optimization.

Workshop Requirements

Each workshop attendee should bring their own notebook computer to work on the class problems. Class rooms should be equipped with power strips for students to plug in their notebook computers and a projector for instructors to project their PowerPoint slides.

Workshop Manual

Each workshop attendee will be provided a workbook (in English) containing copies of the instructors' presentation slides and solutions to the class problem.

Workshop Instructors

This custom designed workshop will be conducted by our high-level and seasoned consultants, with extensive knowledge and experience in the subject matter as well as in conducting training programs around the world.

Language of Instructions

This workshop will be conducted in the English language. However, if desired by the client, one of our bi-lingual consultants can be present throughout the workshop for the benefit of those attendees who are not fluent in the English language. This workshop can be customized further to meet the needs of the client's professionals and managers.

Workshop Logistics

Since this workshop will utilize Petroleum Experts' toolkit (MBAL, GAP and PROSPER software), this workshop should be held in the client's office, and it will be the client's responsibility to provide, during the duration of this workshop, Petroleum Experts' Toolkit (MBAL, GAP and PROSPER software) license to each workshop attendee, and to the workshop instructors, to work on the class problems. It will be ideal if each workshop attendee could be provided a license, if that is not possible then may be two attendees could be provided one license enabling them to work on the problems together.