Oil Reservoir Engineering for Geoscientists
Instructor: Kamal Malick, P.Eng, TAQA North

Pre-Meeting Course– 1 Day: Thursday April 30, 2020

Course Outline:

This course will provide an introduction to oil reservoir engineering for geoscientists. Oil field development is a complex task involving strong collaboration between the various subsurface disciplines. Deep understanding and know-how of oil PVT properties and multi-phase flow is required to exploit and manage oil reservoirs to optimize production and maximize recovery.

This course will go through the main areas of focus for the characterization, development planning and commercialization of oil reservoirs and plays including the integrated subsurface understanding required. The course will begin with the types of oil reservoirs and their fluid properties. The different methods available to estimate oil-in-place such as volumetrics and material balance and the inter-dependence of geoscientists and reservoir engineers to reconcile these different methods will be highlighted. Oil well production and deliverability optimization will be discussed in detail followed by the basics of enhanced oil recovery to improve recoverable resource.

Relevant well and field examples from Western Canada will be shown throughout the training to highlight the application of the various concepts being discussed.

Course Topics:

- Global Oil Production and Reserves
- Oil PVT Properties – API, Bubble-Point, B_o, R_s, and Viscosity
- Volumetric STOOIP Calculation
- Oil Reservoirs Natural Drive Mechanisms
- Material Balance and STOOIP Calculation from Production Data
- Deliverability, Productivity Index & Skin Factor
- Basics of Enhanced Oil Recovery
- Understand capabilities and limitations of different 3D printing techniques;

Who Should Attend:

Geologists, Geophysicists, Petrophysicists, Technologists, Completions, Production and Operations Engineers

*Meeting registration is **NOT** required to sign-up for this course*

Registration Rates: *(rates do not include GST)*

- Early-bird CSPG member rate: $575
- Early-bird non-member rate: $775

Early Bird Ends: *April 9, 2020*

- *CSPG* Member rate: $775
- Non-member rate: $975

Registration Close: *April 23, 2020*

CPD: 7.5

Registration includes: Coffee breaks, lunch and printed course manual.
Time: 8:30am-4:00pm
Location: geoLOGIC systems Classroom, +15 level Aquitaine Tower, 540-5 avenue, Calgary

About the Instructor

Kamal Malick has been working in the energy industry for more than 20 years in a variety of technical and leadership roles. He has worked globally in Canada, USA, North Sea and Asia-Pacific regions on various complex oil and gas fields under natural depletion and EOR schemes such as waterflooding and gas-injection.

Kamal is currently working for Abu Dhabi based TAQA North in Calgary. He works closely with Geoscientists in multi-disciplinary teams to develop appraisal and exploitation plans for various conventional, tight and unconventional oil and gas plays in West Central Alberta such as the Belly River, Upper and Lower Mannville formations. Previously, he was working the Grande Prairie area performing integrated reservoir characterization for the Doe Creek, Dunvegan, Falher and Montney formations. Prior to these roles, Kamal was the Subsurface Manager for one of the largest onshore gas fields in Indonesia consisting of multiple naturally-fractured stacked intervals. He was responsible for managing its subsurface development and depletion planning in addition to optimizing the commercial aspects of various gas contracts on behalf of the PSC partners in South Sumatra. He has also worked on volatile oil and retrograde-condensate gas fields in the Berkine Basin in Algeria and on a number of oil fields in the UK North Sea with a Subsurface consultancy. Kamal started his career from Pakistan where he worked on field development and exploitation planning of oil and gas fields in various stages of their development and commerciality.

Kamal's areas of expertise are reservoir engineering, field development planning, resource evaluation and economic analysis. He has been involved with teaching and mentoring throughout his career including teaching courses through the CSPG. He has given talks at universities and mentors junior professionals from around the world through the SPE e-Mentoring program. Kamal holds a Bachelor's degree in Mechanical Engineering from Karachi, Pakistan and a Master's degree in Petroleum Engineering from Stanford University in USA. He holds a Professional Engineer designation with APEGA and is a member of its Registration Committee.