

Advanced Well Integrity and Annular Pressure Evaluation

June 9th – 13th, 2021

OBJECTIVES

This five-days online course provides a comprehensive understanding of the well integrity and its causes during the life of the well. The course will first briefly review and refresh the knowledge of well construction and well completion, followed by an in-depth discussion of well integrity concepts and the major elements that will lead to a good acceptable long life well integrity.

The course will cover the well tubulars, their impact towards well integrity as well as the overall impact of well barriers on a safe, reliable, and long lasting well integrity. The course will cover the annulus pressure evaluation and MAASP calculation methods, followed by examples.

This course is designed for peoples with a petroleum engineering background and/or a minimum of 3-5 years of field experience with good knowledge of well construction and well completion components.

ABOUT THE INSTRUCTOR



Catalin Teodoriu, Ph.D.

Catalin Teodoriu is Associate Professor at The University of Oklahoma, Norman, Oklahoma. Until 2015 he was head of the Sub-department for Drilling Technology, Completion and Workover at Clausthal University of Technology. Between 2006 and 2009, he was an assistant professor at Texas A&M University, teaching courses on drilling topics such as Drilling Engineering, Introduction to Drilling Engineering, Completion and Workover, and Advanced Drilling Engineering. Dr. Teodoriu is also an experienced instructor in drilling engineering, drilling facilities, casing and drill string mechanics, workover and drilling technologies topics, holding courses on Stuck Pipe, Drilling Hydraulics, Casing Design, Directional and Horizontal Drilling, Drillstring Mechanics for the industry.

COURSE OUTLINE

DAY 1 (4 online hours)

- Introduction and online system demonstration
- Well construction/Well completion
- Well barriers definitions and classification
- Wellbore components (casing, tubing, cement)
- Wellhead components and maintenance

DAY 2 (4 online hours)

- Tubular qualification and inspection, Running of tubulars
- Well Cement and their properties
- Annulus pressure type definition
- Leak rate acceptance criteria
- Wellhead components responsible for SCP monitoring

DAY 3 (4 online hours)

- Defining risk associated with well integrity, Intro to Norsok D10
- WIMS components (technical, operational, organizational)
- Well planning with respect to better well integrity
- Well integrity management for the life of the well versus WIMS
- Well classification based on two well barrier elements status

DAY 4 (4 online hours)

- Well failure model
- Annulus pressure monitoring
- Leak rate acceptance criteria
- SCP scenarios
- Annular integrity monitoring and Well Maintenance

DAY 5 (4 online hours)

- Remedial Actions for sustained casing pressure
- Well integrity failures and annulus pressures response
- Intro to ISO 16530-2/API RP90II
- MAASPs calculations methods
- Final review and Adjourn

CONTACT

JACK ZEDLITZ
jzedlitz@ou.edu

Director of Professional Development
Ronnie K. Irani Center for Energy Solutions
University of Oklahoma

YOANA WALSchAP
ywalschap@ou.edu

Consultant
Ronnie K. Irani Center for Energy Solutions
University of Oklahoma