

# College Well Control

College Well Control Course Outline Wild Well



20 HOURS

## DAY 1

- Understand Situational awareness of ongoing Rig operations at all times; Wild Well Control approach to training
- Identify & describe typical well control equipment at the drilling well site
- Identify and describe surface and drill string equipment/components
- Identify and describe Drilling mud processing equipment, mud degassers, Drill string components, accumulators

## DAY 2

- Understand fluids and their properties specific to well control
- Understand how drilling mud is used, mud weight density and types of drilling muds
- Identify types of fluids that can be encountered in the field and understand fluid safety
- Review pressure basics and concepts and how it applies to well control
- Review Formation pressure, formation characteristics, TVD and MD
- Review hydrostatic pressure and understand how it serves as a barrier in well control
- Calculate hydrostatic pressure
- **Case History:** Perform LOT and FIT and determine how results can affect well control operations; Conduct safety meeting; Demonstration/Simulation
- Understand the concept of a kick, recognize immediate and gradual kick warning signs and kick detection
- Understand flow check procedures
- Understand hard and soft shut in procedures
- **Case History:** taking slow pump rates, recognize kick during drilling operation Perform hard and soft shut in;

Conduct safety meeting

- Understand U-Tube concept and lag time in relation to pressure transfer
- Understand the Driller's method first and second circulation
- **Case History:** Using the Driller's method, circulate out a swabbed kick Conduct Safety meeting

## DAY 3

- Complete Wild Well killsheet by hand or electronic killsheet to support Wait and Weight case history
- Understand the Wait & weight method; perform the following calculations: kill fluid, ICP, FCP. Volume, strokes, time
- **Case History:** Utilize the Wait & Weight method to kill the well
- Understand the well as a U-Tube
- Understand Shut in Drill pipe Pressure (SIDPP) and Shut in Casing Pressure (SICP) and how to calculate
- Recognize stable SIDPP and SICP
- Determine kick type and understand kick migration; Gas behavior and solubility; Gas migration, expansion and well control
- Recognize uncontrolled gas expansion; gas migration with no expansion and controlled gas expansion
- Kick detection in OBM and SOBM
- Understand liquid kicks and migration; underground blowouts
- Review Hydrogen sulfide toxicity levels; exposure and which organs are affected; minimum hydrogen sulfide safety equipment
- Understand that Oil and Gas are regulated by API and IADC
- Perform Bottom Hole pressure calculations