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CCS/CCUS Projects – Class VI Wells for CO₂ Injection

Training Course Outline

- Section 1 — Introduction
- Section 2 — CO₂ Well Design/Construction (From a Life Cycle Well Integrity Perspective)
 - Casing Design – Complex stresses/loads
 - CO₂ specific considerations
 - Cementing Design/Primary Cementing
 - Cementing Fundamentals
 - Good Cementing Practices and Current Industry Updates
 - Cements for CO₂-Rich Environments
 - Material Selection/Tubulars/Completion and Specifications
 - Corrosion risks
 - Long-term stability of wellbore materials in CO₂-rich environments
- Section 3 — Life Cycle Well Integrity (NORSOK D-010 and ISO 16530-1 Standards)
 - Drilling/Operations/Interventions/Workovers/P&A phases
 - Barrier Philosophy/During Drilling/Production/Injection Operations
 - Annular Pressure Management/Gas Migration/Sustained Casing Pressure
 - CO₂ Phase Behavior and Well Design/Completion Considerations
 - Loss of Well Control (LWC) during Well Interventions/Workovers
- Section 4 — Conversion of Existing wells for CO₂ Service
 - Well Integrity Requirements for Class-II wells (for CO₂-EOR projects) versus Class-VI wells (for CCS/CCUS projects)
 - Materials of Construction/Tubulars/Cements, etc.
 - Regulatory Considerations
- Section 5 — Well Placement
 - Injectivity/Regularity/Capacity Considerations
 - Geo-mechanical Considerations – Fractures/Faults
 - Seismicity Considerations

- **Section 6 — Plugging and Abandonment (P&A)**
 - **Regulatory Requirements for P&A of legacy plugged and abandoned wells within Area of Review (AOR) of proposed Class VI Wells**
 - **Current Industry Practices**
 - **Post-closure requirements**
 - **Section 7 — Injectivity/Regularity Consideration in Well Design and Well Placement**
 - **Geo-mechanical Considerations – Fractures/Faults**
 - **Section 8 — Potential Use of Directional/Horizontal Wells for CO₂ Injection**
 - **Pros/Cons of Straight/Vertical Wells**
 - **Section 9 — Q/A Session**
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Note: This course can be customized to meet the specific needs of a client and can be offered virtually or in-person at the client's office(s), around the world, whenever mutually convenient.