

**WellCAP Cross-reference Tool\***  
WELL SERVICING OPERATIONS-COILED TUBING  
WCT-2CTF-X – FUNDAMENTAL LEVEL

<b>WELLCAP WCT-2CTF FUNDAMENTAL LEVEL</b>		<b>REFERENCE TO APPLICATION MATERIALS</b> (Note Where Each Topic Can Be Found)			
<b>WELLCAP OUTLINE NO.</b>	<b>TRAINING TOPIC</b>	<b>MANUAL</b> (Cite Chapter and Page No.)	<b>LECTURE</b> (Note Day/Time of Course Outline)	<b>SIMULATION</b> (Identify Exercise)	<b>OTHER RESOURCE</b> (Identify Video, CBT Program, Handout, Etc.)
<b>I.</b>	<b>REASONS FOR PERFORMING COILED TUBING OPERATIONS</b>				
<b>A.</b>	Definition of Coiled Tubing Operations				
<b>B.</b>	Reasons for Performing Coiled Tubing Operations				
<b>II.</b>	<b>DEFINITIONS AND CALCULATIONS</b>				
<b>A.</b>	Pressure Fundamentals				
<b>B.</b>	Static Wells and Live Wells				
<b>C.</b>	Volumes, Capacities and Displacements				
<b>D.</b>	Force				

\* To further facilitate cross-referencing, the proposed document may include a margin or parenthetical reference to the appropriate WellCAP outline number.

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<b>III.</b>	<b>INFLUX FUNDAMENTALS</b>				
A.	Definition of a Fluid Influx				
B.	Causes of a Fluid Influx				
C.	Fluid Influx Detection				
D.	Importance of Influx Management				
<b>IV.</b>	<b>GAS CHARACTERISTICS AND BEHAVIOR</b>				
A.	Pressure and Volume Relationship (Boyle's Law)				
B.	Gas Expansion and Migration Relationships				
C.	Solubility of Gases				
<b>V.</b>	<b>DRILLING, COMPLETION AND WORKOVER FLUIDS</b>				
A.	Use of Fluids				
B.	Liquids				
C.	Nitrogen Gas				
D.	Fluid Properties and Characteristics				
E.	Fluid Flow Behavior				
F.	Fluid Measuring Techniques and Concerns				

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<b>VI.</b>	<b>GENERAL OVERVIEW OF SURFACE AND SUBSURFACE WELLBORE EQUIPMENT</b>				
<b>A.</b>	Production (Christmas) tree				
<b>B.</b>	Completion Tubulars				
<b>C.</b>	Completion Equipment				
<b>D.</b>	Safety Systems and Emergency Shutdown Devices (ESD's)				
<b>VII.</b>	<b>OVERVIEW OF COILED TUBING EQUIPMENT</b>				
<b>A.</b>	Coiled Tubing Equipment				
<b>B.</b>	Stripper (Pack-Off) Assemblies				
<b>C.</b>	Well Control Stack Rams				
<b>D.</b>	Additional Well Control Equipment				
<b>E.</b>	Chokes and Choke Manifolds				
<b>F.</b>	Accumulators				
<b>G.</b>	Coiled Tubing Limitations				
<b>H.</b>	Fluid Measuring Devices				
<b>I.</b>	Gas Detection and Handling Systems				

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<b>VIII.</b>	<b>RIG BLOWOUT PREVENTER EQUIPMENT</b>				
A.	Rig Blowout Preventer Equipment				
<b>IX.</b>	<b>PROCEDURES</b>				
A.	Pre-Recorded Well Information				
B.	Securing the Well				
C.	Well Control Drills				
D.	Verification of Secured Well Conditions				
E.	Well Monitoring During Operations				
<b>X.</b>	<b>WELL CONTROL TECHNIQUES</b>				
A.	Objectives of Well Control Techniques				
B.	Well Intervention Techniques (without killing the well)				
C.	Techniques for Killing a Well				
D.	No Returns Pumping Technique (Bullheading)				
E.	Preparation of a Well Control Kill Worksheet				

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<b>XI.</b>	<b>COMPLETION WELLBORE COMPLICATIONS AND SOLUTIONS</b>				
A.	Blockages and Trapped Pressure in Tubing / Well				
B.	Pressure on Casing				
C.	Underground Flow				
D.	Paraffin				
E.	Hydrates				
F.	Lost Circulation				
<b>XII.</b>	<b>COILED TUBING SERVICE COMPLICATIONS AND SOLUTIONS</b>				
A.	Collapsed Coiled Tubing				
B.	Pneumatically-Controlled Valves				
C.	H <sub>2</sub> S Considerations				
D.	Operations with Specific Well Control Concerns				

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<b>XIII.</b>	<b>ORGANIZING A WELL CONTROL OPERATION</b>				
A.	Personnel Assignments				
B.	Pre-Recorded Information				
C.	Plan Responses to Anticipated Well Control Scenarios				
D.	Communications Responsibilities				
<b>XIV.</b>	<b>TESTING</b>				
A.	Installation of Rings, Flanges and Connections				
B.	MAWP and Equipment Function Tests				
C.	Well Control Equipment Component Testing				
<b>XV.</b>	<b>GOVERNMENT, INDUSTRY &amp; COMPANY RULES, ORDERS &amp; POLICIES</b>				
A.	Incorporate by reference				