

WellCAP Cross-reference Tool*
WELL SERVICING OPERATIONS-COILED TUBING
WCT-2CTS-X – SUPERVISORY LEVEL

WELLCAP WCT-2CTS SUPERVISORY LEVEL		REFERENCE TO APPLICATION MATERIALS (Note Where Each Topic Can Be Found)			
WELLCAP OUTLINE NO.	TRAINING TOPIC	MANUAL (Cite Chapter and Page No.)	LECTURE (Note Day/Time of Course Outline)	SIMULATION (Identify Exercise)	OTHER RESOURCE (Identify Video, CBT Program, Handout, Etc.)
I.	REASONS FOR PERFORMING COILED TUBING OPERATIONS				
A.	Definition of Coiled Tubing Operations				
B.	Reasons for Performing Coiled Tubing Operations				
II.	DEFINITIONS AND CALCULATIONS				
A.	Pressure Fundamentals				
B.	Static Wells and Live Wells				
C.	Volumes, Capacities and Displacements				
D.	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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III.	INFLUX FUNDAMENTALS				
A.	Definition of a Fluid Influx				
B.	Causes of a Fluid Influx				
C.	Fluid Influx Detection				
D.	Importance of Influx Management				
IV.	GAS CHARACTERISTICS AND BEHAVIOR				
A.	Pressure and Volume Relationship (Boyle's Law)				
B.	Gas Expansion and Migration Relationships				
C.	Solubility of Gases				
V.	DRILLING, COMPLETION AND WORKOVER FLUIDS				
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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VI.	GENERAL OVERVIEW OF SURFACE AND SUBSURFACE WELLBORE EQUIPMENT				
A.	Production (Christmas) tree				
B.	Completion Tubulars				
C.	Completion Equipment				
D.	Safety Systems and Emergency Shutdown Devices (ESD's)				
VII.	OVERVIEW OF COILED TUBING EQUIPMENT				
A.	Coiled Tubing Equipment				
B.	Stripper (Pack-Off) Assemblies				
C.	Well Control Stack Rams				
D.	Additional Well Control Equipment				
E.	Chokes and Choke Manifolds				
F.	Accumulators				
G.	Coiled Tubing Limitations				
H.	Fluid Measuring Devices				
I.	Gas Detection and Handling Systems				

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VIII.	RIG BLOWOUT PREVENTER EQUIPMENT				
A.	Rig Blowout Preventer Equipment				
IX.	PROCEDURES				
A.	Pre-Recorded Well Information				
B.	Securing the Well				
C.	Well Control Drills				
D.	Verification of Secured Well Conditions				
E.	Well Monitoring During Operations				
X.	WELL CONTROL TECHNIQUES				
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.	Lubricate and Bleed Method				
F.	Constant Bottomhole Pressure (BHP) Methods				
G.	Preparation of a Well Control Kill Worksheet				
H.	Well Control Procedures				

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

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