

# Facilitation of HEMP workshop for a Completions and Well Intervention project and the creation of Bowtie diagrams and subsequent HSE documents.

United Safety facilitated HEMP and Bowtie workshops in accordance to stringent IADC standards whilst also building the Hazard registry.

### Challenge

To provide a Completions and Well Intervention HEMP (Hazards and Effects Management Process) with the required input by experts from the customer.

### Solution

The execution of the HEMP process with an in-depth assessment of the Hazard and Effects including building Bowties for Major Hazards and a Hazard Registry according to regulatory standards.

### Results

The HEMP/Safety case was successfully prepared with minimal issues and no delays and in compliance with IADC standards.

The Customer needed to identify the hazards and assess the risks for a project in Southern Iraq. United Safety was contracted to facilitate the Completion and Well Intervention HEMP workshop in Southern Iraq prior to starting the project. United Safety created a full risk register with the corresponding Bowties.

### KEY CUSTOMER BENEFITS

#### Planned and facilitated workshops for customer to ensure all precautions were taken before field development

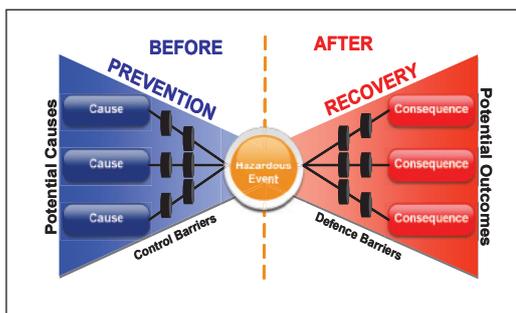
United Safety initiated a staged approach; Phase One was to facilitate hazard identification workshops in order to build a proper Hazard register. Phase Two was to build the Bowties and develop the HEMP according to IADC Safety Case standards. This ensured a comprehensive, well-planned approach that resulted in a smooth process with full buy-in and support from the customer. United Safety also ensured that customer's subject matter experts were actively involved in all workshops.

#### Compliance with stringent IADC standards

The process and the workshops complied with IADC standards and the requirements of the Customer. This approach provides the necessary assurance that all safety aspects of the project are adequately addressed.

#### Bowties for in-depth analysis and ALARP

Bowties are excellent visual tools to analyze hazards and effects and to determine which prevention and mitigation barriers are needed to manage the risks. The Bowties further demonstrate that the barriers are tied to specific procedures, job titles and competencies; thereby assuring the risk is reduced to as low as is reasonably practicable (ALARP).



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