



Safety Management Systems in the Oil Field

Objectives

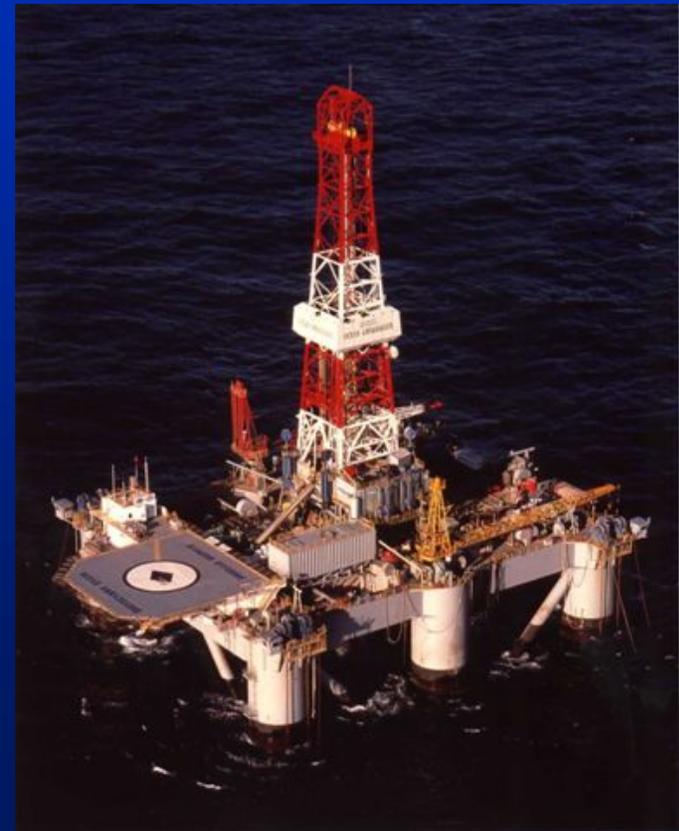
- **Background**
- **Current SEMS Limitations**
- **Solution**
 - **Culture Change**
 - **SEMS Standardization**
 - **Training**

Drilling Rigs & Aircraft Carriers

“The most hazardous real estate on earth”



The same techniques that allow humans to master this environment...



..... Definitely allow the mastering of your environment.



Military Nuclear Power

- US Navy
 - 65 years IFO
 - 5400 reactor years
- Russian Navy
 - Dozens of major accidents
 - 507 killed

The difference:
Standards and Training

Current SEMS Limitations

- **Cumbersome**
- **Too many (SEMS, HSE, SHE, QHSE, etc)**
- **Not well executed in the field**
- **Seen as an administrative burden**
- **Not used as a meaningful tool**
- **High training overhead**

A photograph of an offshore oil rig deck. A worker in a bright orange safety suit is visible in the center, working on a large yellow pulley system. The rig's structure is white and red, with various cables and pipes. The background shows a clear blue sky and a deep blue ocean.

What Do We See...

- **Assumptions**
- **Very Limited Debrief Culture**

Assumptions

- **Meaningful planning has occurred**
- **Effective communication is occurring**
- **People will react properly under duress**



High Hazard Operations Require:

- **Discipline**
- **Standardization**
- **Execution culture**
 - **Cross-Checks** (JSA, THINK, STOP, PTW, LOTO, etc)
 - **Mutual Support** (One is None, Two is One)
 - **Oversight** (Broader Perspective, Situational Awareness)
- **Leadership**

Plan Based Execution



Celena
Galveston Dock

C-LEGEND
WORK BOAT

TODAY'S
DATE SEPT. 30, 2009

ON LOCATION

MR. HENRY
CREW BOAT

Job Plan

- ① Objective
- ② Resources
 - Tools
 - People
 - Information
- ③ Steps - (Who, What, When)
- ④ Risk Assessment
- ⑤ A.A.R.



Solution

- **SEMS Standardization**
 - **Common**
 - **User friendly**
 - **Automated**
- **Competency**
 - **Defined**
 - **Measured/Reported**
 - **Linked to SEMS**
- **Training / Training Management**
 - **Commercial/Military Aviation, Nuclear**
 - **Simulation/Automation**



Questions/Comments