ORGANIZING AND DIRECTING WELL CONTROL OPERATIONS
Organizing and Directing Well Control Operations

Learning Objectives

- You will learn the importance of:
  - Communicating:
    - Personnel.
    - Daily operations.
    - Chain of command.
  - Drills.
- You will learn basic drills for H₂S.
It is imperative that personnel involved in well control operations are properly organized:

- Know what to expect.
- Know what's expected of them.

Drills must be conducted for proficiency.
- Station bills for all personnel involved.

- Know how to perform properly.
Organization and Directing Well Control Operations

- Organization and directing of rig personnel is essential for well control operations.
- Many rigs require that drills be used to ensure that everyone knows his/her responsibilities during operations.
- Procedures, stations, evacuation route(s), and restrictions of authority should be part of every well control drill.
- There must be a definite chain of command in any operation.
Organizing and Directing Well Control Operations

- Everyone must know which authorities are given to each person.
- Communication is vital and should be stressed throughout all operations and especially during well control events.
- Prior to commencing all operations the crew must be briefed on what is:
  - Planned
  - Expected of them as a crew
  - Expected of them as individuals
- Pre job safety must also be stressed.
Crew Responsibilities

The primary responsibility for each crew member is to always communicate. Each crew member must know his/her situation and duties for well control activities.

- Driller
- Toolpusher/Rig Manager
- Company Representative
- Ballast/Barge Engineer
- Derrickhand/Assistant Driller
- Roughnecks
- Electrician/Mechanic
- Mud Engineer
- Roustabouts
- Motorman
- Cementer
- Subsea Engineer (floating operations)
- Service Personnel
Communication is essential for proper well control.

- **Before the job** – Safety meetings are called before jobs to explain the tasks and duties of each crew member for the specific job.
  - Asking questions and learning your duties is critical for proper well control.
Communications

- **During the job** – each crew member has responsibilities and must report to a supervisor.
  - If anything out of the ordinary occurs, it must be reported immediately to avoid disastrous situations.

- **Changeover and documentation** – handover notes should be prepared for the next shift, along with an explanation of what happened during the day’s work, what tasks were accomplished, and what tasks have yet to be done.
CAUTION
HARD HATS, SAFETY SHOES, AND EYE PROTECTION REQUIRED ON THIS LOCATION

ALL PERSONNEL ARRIVING MUST CHECK IN WITH COOK OR TOOLPUSHER

NOTICE
WELCOME TO THE

IT IS REQUIRED THAT IMMEDIATELY UPON ARRIVAL, ALL PERSONS SIGN THE VESSEL LOG. IT IS ALSO REQUIRED THAT BEFORE ENGAGING ANY WORK ACTIVITIES, EACH PERSON MUST RECEIVE A SAFETY ORIENTATION FROM THE RIG SAFETY REPRESENTATIVE. SAFETY IS OUR #1 PRIORITY

NO SMOKING
Pre-Planning and Drills

- Pre-planning involves setting a well control plan of action for all expected operations.
  - Once a plan of action has been created, the crew should learn it inside and out.
  - Practice every drill as if it were the real thing.
- Planned drills should be carried out to ensure familiarity.
Pre-Planning and Drills

- Unplanned drills will test personnel’s reactions.
  - Operator and rig supervisors should participate.
    - What is the responsibility of each person involved?
- Blowouts can be reduced if personnel perform job duties properly.
  - Watch out for warning signs of kicks and pressure change.
Pit Drills

- Conducted to emphasize the importance of the fluid level in pits and to ensure that the crew can react swiftly to shut the well in correctly.
  - Drills conducted by raising pit level float.
  - Drills conducted by raising paddle in flowline.
- Drills should be conducted both when on bottom and on trips.
  - Use flow check procedures and shut-in the well.
  - Timed response from drill initiation to shut in should be recorded.
Toxic Gases

- Toxic gases are a hazard and personnel should know precautions to keep safe.
- If toxic gas is inhaled and enters the bloodstream, poisoning occurs.
- With some gases and certain concentrations, a person can die if he/she is not exposed to fresh air immediately.
Toxic Gases

- Symptoms of lesser exposure include:
  - Drowsiness, fatigue
  - Dizziness, headache
  - Eye irritation
  - Coughing
  - Pain or dryness in nose, throat and chest
  - Nausea or gastrointestinal problems
Hydrogen Sulfide or Sour Gas

- It is called sour gas because it is a very toxic colorless gas with an odor similar to rotten eggs in low concentrations.
- At higher concentration levels it deadens the sense of smell so it is hard to detect.
- It is very flammable and corrosive and settles in lower areas because it is heavier than air.
Toxic Gases

- Safety measures if exposed to Hydrogen Sulfide:
  - Always know the wind direction.
  - Always know the escape routes.
  - Keep breathing apparatus close.
  - Never panic.
  - Be alert for gas detection alarms which should be tested daily.
  - Hold your breath.
  - Help anyone if you can without endangering yourself.
  - Evacuate the area and find fresh air.
H₂S Drills

- On activation of an H₂S alarm:
  - Immediately put on breathing apparatus.
  - Extinguish all open flame sources.
  - Turn on bug blowers to help evacuate potential gasses from rig floor area.
  - Account for all personnel.
  - Personnel should work on buddy system.
Toxic Gases

- Non-essential personnel safely evacuated to upwind area.
- Location entrances closed and guarded.
- Contingency plans initiated to notify proper authorities.
- H$_2$S warning signs, flags, lights, etc. should remain activated until all clear sounded.
Learning Objectives

- You learned the importance of:
  - Communicating:
    - Personnel
    - Daily operations
    - Chain of command
  - Drills
- You learned about toxic gases and basic drills for H₂S