Air Rotary Drilling

- This workshop will present general information on air rotary drilling, safety around the drill rig and selecting proper size tools and their use. Safe equipment operation will be addressed, in addition to unique properties of this method.

- In this session on air rotary drilling, we will discuss safe set up and tear down, air rotary drill equipment, proper support equipment, bit selection and proper maintenance of hammers.

RIG SETUP AND TEAR DOWN

- Rig set up and tear down safely
  - Air rotary drilling method
  - Selection of proper support equipment & accessories
  - Selection of a bit for maximum production
  - Proper hammer maintenance

Considereations

1. Always call for utility locations prior to set up.
2. Private utilities vs Public utilities
   - Duration & expiration dates
   - Site meets
   - Maps & drawings
   - Flag or paint (both)
3. Appropriate blocking methods
Reasons for Proper Blocking

- Air Rotary Methods

- Air compressor {cfm vs psi}
- Maintenance & safety issues
- Hose ratings & safety issues

Good Blocking vs bad
Importance of proper bid selection
- Rotary Speeds
  Shock Subs (optional)

- Pull down & hold back pressures
  Down hole air pressure
Methods

- Most common methods of air rotary drilling
  - Air Drilling
  - Air Foam Drilling
  - Air Mist Drilling
  - Air Foam Gel Drilling

Proper Containing of Drill cuttings

Hammer Maintenance

- Know your hammer and its parts
- Recognition of wear
- Importance of proper lubrications
- Hammer Storage techniques

Hammer Care

Hammer Storage
Hammer Transport
Completion of Well

- Properly seated casing
- Properly grouted casing
- Proper development techniques
- Well head securement

Safety one more time

- Safety Training
- Tail gate talks
  - NGWA
  - Insurance company loss control
  - Fmcsa / Osha
- Loss control evaluation
- Accident evaluation

Safety First:

- At work
- At home
- At play
- And end of day.
- MAKE SAFETY LAST

In closing

- Water affects everyone and everything on Earth
- We are the GROUND WATER PROFESSIONALS.

Questions?
AIR ROTARY DRILLING

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