

# Tips on Drilling

## 1. Be Prepared

- Experienced, skilled drill operator
- Avoid improper bit handling, i.e. carbide against carbide damage
- Drill rig properly lubricated
- Sufficient drilling accessories on hand
- Keep accessories clean and free from damage
- Striking face is square and true

## 2. Starting the drill

- Firm footing for the drill
- Align and collar the hole properly
- Begin slowly and adjust the feed and throttle as the bit buries

## 3. Drilling

- Maintain enough rotation for good penetration
- Excessive rotation will wear the gauge
- Maintain correct feed pressure;
  - Insufficient air pressure leads to a loose drill string and premature wear
  - Sufficient air pressure is ideal to keep the bit from bouncing on the bottom
  - Too much pressure will buckle and bind the steel in the hole
  - Over feeding in hard rock will reduce penetration
  - Over feeding in soft rock can lead to burying the bit and hanging the steel

## 4. Clean hole

- Blow the hole frequently when drilling deep
- Soft or muddy ground can seep causing the steel to hang up
- Blow with every drill rod added below the hole, preventing a plugged steel

## 5. Drill dieseling

- Occurs with insufficient feed pressure
- Also happens with full throttle when withdrawing the bit
- Dieseling heats up the drill and burns off the lubricant
- Results could include a destroyed hammer
- Stop dieseling by reducing the drill throttle and increasing feed pressure

## 6. Changing bits

- Try to follow a larger bit with a smaller bit
- Try to use new bits with new steel
- Use lubricant on bits, as well as couplings and steel threads
- Remove bits with a bit wrench or “rattle” loose, no beating with a hammer