BD Drill **Black Diamond**
Drilling Services Australia

Guide to Improving Drilling Performance

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1. Keep the bit rotating, turn the air on before the bit comes into contact with the ground, do not turn the air off until the bit is out of the hole. If the bit is to remain in the hole while adding drill pipes please blow the hole clean for 1 minute before turning the air off.
2. When purchasing a new drill remember to specify compressors with adequate capacity. 7000 to 10000 linear feet per minute return air velocity is required to effectively clean the hole. Don't forget to account for altitude and cutting density and size.
3. Inspection of the drill bit should be conducted after each hole and the condition of the bit should be recorded.
4. Pressure gauge increases may indicate air passages are becoming blocked.
5. A decrease in air pressure may indicate a leakage in the air system.
6. Hot cones may indicate an obstruction to the air supply to the bearings.
7. Use the minimum amount of water required to suppress the dust.
8. The Inside Diameter of the pin and box connections of the drill string should be equal to or larger than the Inside Diameter of the pin on the drill bit. This will reduce the pressure drop loss across the drill string to the lowest possible psi.
9. When making up the rock bit use slow rotation to ensure the drill string and the drill bit have mated properly. Pay special attention to avoid cross threading.
10. Early bit failure can be avoided by not using bent drill pipes, or excessively worn drill pipes, stabilisers, deck bushings and shock subs.
11. Use the recommended tool joint compound to maintain good connections.
12. Use the factory recommended weight and rotation speed for the corresponding ground formation being drilled.
13. Rotary drill speed should be reduced as the downward pressure is increased, likewise, downward pressure should be decreased as rotary drill speed increases.
14. Accidental impacts or dropping of the drill bit and string can damage vital parts such as bearings or cones.
15. Accurate information is valuable. Always record important information about each hole. Such as; Time in the hole, rpm, weight on bit, total footage drilled, psi and type of ground formation drilled.
16. Ensure good communication with your supplier, feedback will lead to improvement.

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