



EXPLORATION & WATER WELLS: AIR ROTARY DRILLING



WATER MANAGEMENT

- + SOURCING
- + WELL & PUMP MAINTENANCE
- + WATER TREATMENT TECHNOLOGIES
- + WATER RECYCLE & REUSE
- + WATER TRANSFER
- + WATER STORAGE

CONSTRUCTION

- + GEOTECHNICAL CONSTRUCTION
- + TREATMENT PLANT CONSTRUCTION
- + ALTERNATIVE DELIVERY
- + RENEWABLE ENERGY
- + SEWER SYSTEMS
- + TRENCHLESS REHABILITATION
- + WATER SUPPLY
- + WATER TRANSMISSION & DISTRIBUTION

DRILLING

- + EXPLORATION DRILLING
- + SPECIALTY DRILLING
- + WATER WELLS
- + BOREHOLE SERVICES

The air rotary drilling method is a versatile and effective drilling method for boring advancement in both unconsolidated and consolidated formations.

Layne utilizes its staff of scientists and engineers to determine how a well can most successfully be completed. Using geological data Layne's experts can formulate the most efficient and effective way to drill to the desired depth. Air based drilling methods are historically used in bedrock formations, but used in conjunction with casing advance systems have applications in unconsolidated formations.

Employing air as the drilling medium has a number of advantages over other methods. Since no fluid is introduced into the borehole formation samples are not washed away or altered by the drilling fluid. The static water level in the hole can also be easily determined once the drill encounters the static water level. Less well development time is historically required since the borehole walls are damaged less than with a fluid based program. In areas where off site drill cutting and fluid disposal is required, air drilled borings generated less investigative derived wastes.

ADVANTAGES OF AIR ROTARY DRILLING

- + Low environmental impact
- + Maximized penetration rate
- + Improved borehole data throughout the drill program
- + Improved bit life
- + Good bore cleaning capabilities
- + Clean cutting samples
- + No plugging in water bearing zones
- + Works well with other drilling methods for maximum efficiency
- + Early information when water is reached, it can easily be analyzed for quantity and quality

APPLICATIONS FOR AIR ROTARY DRILLING

- + Water well development
- + Monitoring well construction

