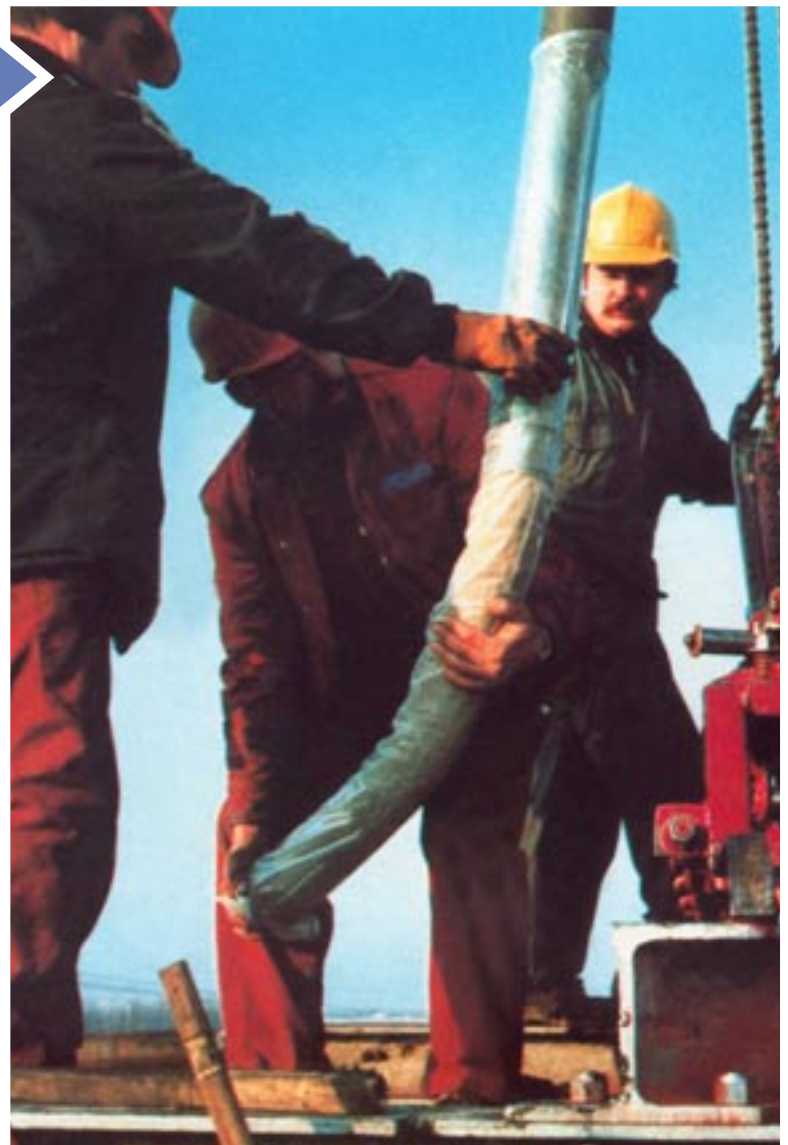




ADVANTAGES OF SONIC DRILLING FOR MINERAL EXPLORATION

- By using high frequency vibrations, the sonic drill can produce accurate and almost totally undisturbed core samples from both solid and unconsolidated materials.
- The sonic drill can quickly extract nearly perfect, highly representative, continuous core samples from surface to bedrock with a recovery rate in excess of 95%.
- Core samples can be subjected to detailed inch by inch analysis to evaluate the potential mineralization of the subsurface.
- Cores can be obtained from a wide variety of mineral deposits including oil sands, slag piles, mine tailings and heap leach pads with an absolutely minimal amount of disturbance and compaction.
- The sonic drill performs extremely well in difficult soil conditions such as those containing boulders, gravel, clays, shale, permafrost and saturated sands.
- Holes are drilled, cored and cased by rotating and vibrating the rod, core barrel and casing at resonant sonic frequencies.
- The coring of unconsolidated material is carried out completely dry without the use of any drilling fluid.
- Cased holes prevent the collapse of the borehole and ensure that cores are not contaminated by up-hole debris.
- The sonic drill bores extremely straight holes as compared to a conventional rotary machine.
- Cores are held in the core barrel by friction and by the use of suitable core catchers.
- Retrieved cores are gently extruded by vibration into clear plastic sleeves which can easily be logged, sampled, photographed and archived for future examination.
- Cores are marked as to their depth and then individually crated for shipping.



SONICOR 50K DRILL HEAD

- The patented sonic drill head, manufactured by the Sonic Drill Corporation, provides the rotation and vibration forces necessary to allow the coring and casing of any overburden material to create an accurate geological profile of the subsurface.
- High frequency resonant vibrations are sent down the drill string to the drill bit. The operator controls these frequencies to suit the specific conditions of the soil/rock geology.
- Resonance magnifies the amplitude of the drill bit, which fluidizes the soil particles at the bit face, allowing for fast and easy penetration through most geological formations, including boulders and bedrock, while an internal air spring isolates these vibrational forces from the rest of the structure.





■ Manganese core samples



■ Dolomite lime core samples



■ Uranium core samples

Photo courtesy of UEX Corporation



■ Mine tailing core sample



■ Kimberlite core sample



■ Placer gold core samples



Photo courtesy of UEX Corporation





■ SAND, GRAVEL AND SHALE



■ CLAY AND SOIL



■ ROCK

CALL SONIC DRILLING LTD. WHEN YOU NEED ACCURATE, DETAILED CONTINUOUS CORE SAMPLES OF ANY OVERBURDEN MATERIAL