# Remove Rocks and Concrete

HERE IS A TOOL DESIGNED TO BREAK ROCKS AND CONCRETE IN LOCATIONS WHERE CONVENTIONAL EXPLOSIVES ARE NOT AL-LOWED OR ARE INAPPRO-PRIATE. ENERGY FROM A CARTRIDGE OF PROPEL-LANT (GUNPOWDER) IS DI-RECTED INTO A DRILL HOLE FILLED WITH WATER TO SPLIT ROCKS AND LOOSEN STUBBORN CON-CRETE. THIS HYDRO-FRACTURING TECHNOLO-GY ALLOWS SPLITTING AND BREAKING WITHOUT THE NOISE AND FLYROCK ASSOCIATED WITH CON-VENTIONAL EXPLOSIVES.



This 20 cubic yard boulder held up constuction







## Non-Explosive Boulder Breaking

### Eloranta&AssociatesInc.



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No Flyrock! No Permits!

218-753-2666

### Non-Explosive Rock Breaker



Boulder Busters uses an effective way to safely break rocks and concrete in situations where conventional explosives are prohibited or inappropriate. This innovative technology will solve some of a blasters most troublesome problems. The secret is in the controlled use of propellant energy, (gunpowder) as the power source. Cartridges of propellant are used to direct a pressure impulse into a drill hole filled with water. The ensuing pressure wave forces the water into existing micro-cracks in the material resulting in tensile fracturing.

#### **How It Works**

In use, expanding gases generate a rapid pressure impulse upon a column of water in a drill hole. This effect causes controlled tensile fracturing in rock or concrete. Massive material requires less energy when the fracturing occurs under tension. The device is placed in a water filled drill hole, held down with a flexible mat, and mechanically initiated with a short lanyard. It's safe to use in close quarters since fly rock is negligible, noxious fumes are non-existent, and ground vibrations are minimal. In many situations, it enables simple breaking operations to be carried out without the hassles and restrictions placed on conventional explosive use in crowded areas.

#### **APPLICATION:**

- Secondary oversize breakage
- Utility trenching applications
- Civil construction
- Concrete demolition
- Site clearing
- Trail work and facility improvements
- Roadside ditch obstructions
- Oversize breaking in slide removal
- Farming operations

### WHY BOULDER BUSTERS?

- Affordable and Efficient
- Engineering/Construction Experience
- Bonded/Insured

Boulder Busters will come to your site with drills, hoses and compressor. Concrete breakage, island jobs, construction sites. Problem boulders in cabin roads that stops grading and hinders snowplowing can be gone in a couple hours.



Boulders under docks and boatlifts



Propellant produces gas pressure



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