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BOULDER BUSTER

Breaking Rocks Without Explosives

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Introduction

A new device can split large boulders or blocks of concrete without the flyrock and noise produced by explosives. The *Boulder Buster* (Figure 1) was developed in South Africa by the Swartklip Corporation. It uses a cartridge resembling a shotgun shell and a column of liquid to generate a high-impulse pressure wave. The pressure wave fractures the surrounding structure. The Boulder Buster can break boulders larger than 2 meters in diameter and rock walls in 2-meter lifts. Yet it is not rated as an explosive, and certification and training are minimal. In addition, the Boulder Buster has no special storage or transportation requirements.

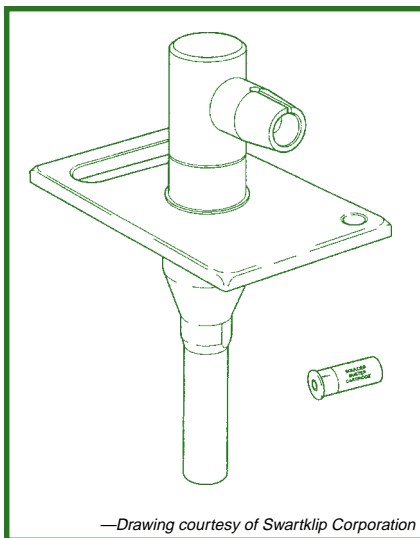


Figure 1—The Boulder Buster can break boulders larger than 2 meters in diameter, without producing fly rock or starting fires.

The Boulder Buster is primarily a firing mechanism mounted on a flat plate with a 9-inch barrel extending below the plate. (Figures 2 through 12 depict the preparation for firing.)



Figure 2—A hole is drilled in the boulder using a portable drill.



Figure 3—Water is poured into the hole.

A hole is drilled in the rock or other structure and water or a gel is poured into the hole. The Boulder Buster is

placed on the structure's surface with the barrel inserted into the liquid-filled hole. A mat is placed over the device

and the Boulder Buster cartridge is chambered in the breech. After the firing mechanism has been screwed

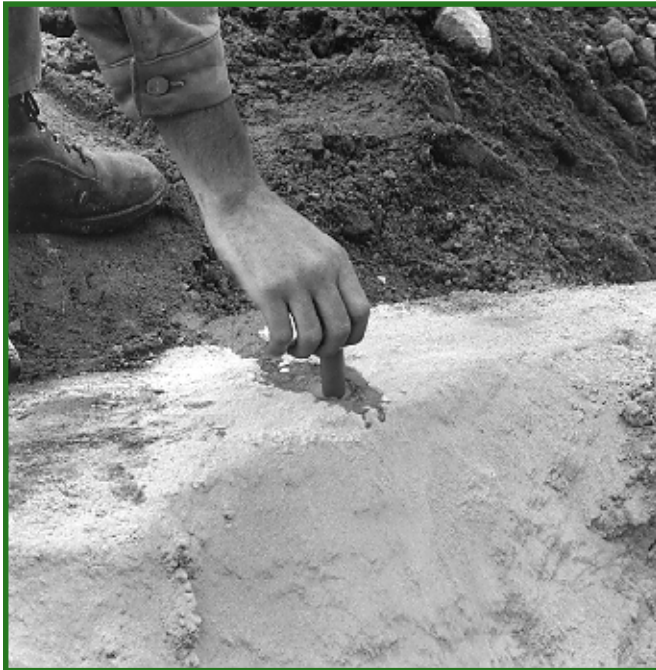


Figure 4—A booster cartridge is dropped in the hole.



Figure 6—The blast mat is placed over the breech block.



Figure 5—The impulse barrel and breech block assembly is placed in the hole.



Figure 7—The "primer" cartridge is placed in the breech block.