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THE USE OF SHAPED CHARGES FOR EPW PERFORMANCE ENHANCEMENT (U)

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DEPARTMENT OF ENERGY DECLASSIFICATION REVIEW
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NAME: Nancy Connelly
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Shaped Charge/Earth Penetrator Concept

Sandia National Laboratories are investigating the use of shaped charges to enhance the performance of earth penetrating weapons. The present application is toward Phase II studies of the Strategic Earth Penetrator Weapon (SEPW), although some calculations for the B61 Interim Solution Candidate will be shown.

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SHAPED CHARGE / EARTH PENETRATOR CONCEPT

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SHAPED CHARGE COMPONENTS FOR EARTH PENETRATOR PROGRAM

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EARTH PENETRATOR / SHAPED CHARGE COMPONENT REQUIREMENTS

- DESIGN SHAPED CHARGES FOR EARTH PENETRATOR SYSTEM

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SHAPED CHARGE CONFIGURATIONS FOR EARTH PENETRATOR PROGRAM

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Hydrocode simulation of a 42° conical shaped charge, initial liner configuration, and jet slug formation at 40 and 60 μs

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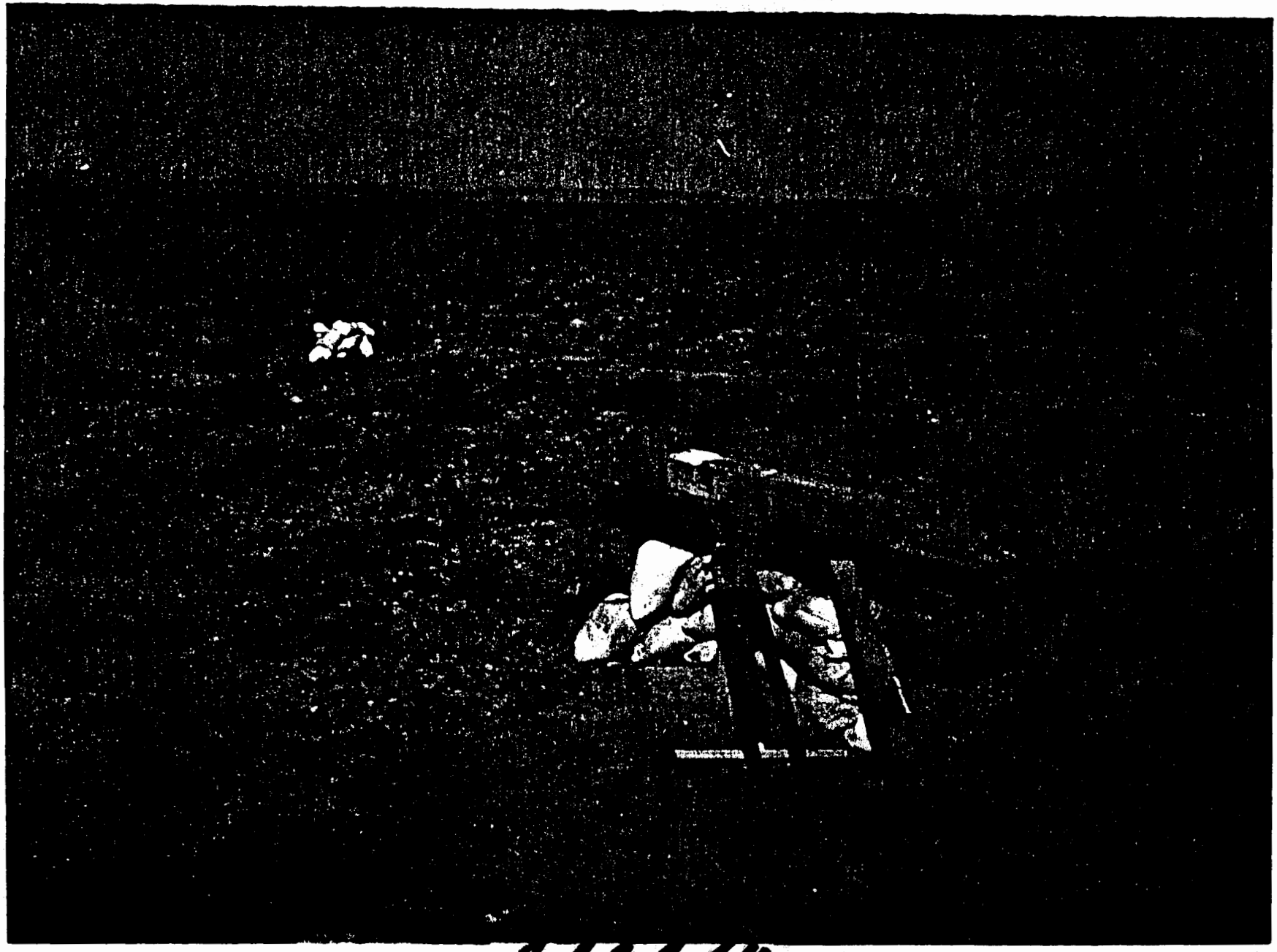

Hole Cleaning for TTR Tests

After each test, the hole was cleaned by blowing out the rock fragments with compressed air. The hole profile in hard rock such as welded tuff is not altered by compressed air. Then the hole dimensions were recorded.

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THEORETICAL VERSUS EXPERIMENTAL CONICAL SHAPED CHARGE PENETRATIONS IN TUFF

*UNABLE TO CLEAN HOLE OUT WITH AIR COMPRESSOR

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Proposed for Publication in Proceedings of AIAA/BMO Workshop on Future Systems & Ballistic Missile Technology. (Name of Journal)

Proposed for Presentation at _____ (Name of meeting, conference, or symposium)

Date of Meeting 3/22-25/88 Location Norton AFB, San Bernadino, CA Sponsoring Org. 5165

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Patent Interest: ☒ no ☐ yes Signature/Initials D. C. Groening Date 4/8/88

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