

Angle Drilling and Blasting Procedures Martin Marietta Aggregates

Michael E. Kovach, Explosives Engineer
Martin Marietta Aggregates
2710 Wycliff Road
Raleigh, North Carolina, U. S. A.

ABSTRACT.

This discussion is an overview of an approach to drilling and blasting angle holes at Martin Marietta Aggregates. Method of determining burdens, hole depths, angle settings and explosive selection will be discussed in detail with an emphasis on safety and production. Such techniques and methods involve the use of hand-held surveying instruments such as the Abney level, pocket transit and inclinometer along with measuring tape and burden pole. An interesting method developed by Oscar Banfield a retired Martin Marietta and E. I. duPont engineer, for setting the proper angle on a drill will also be presented. This treatise is a discussion of the use of simple yet important tools and techniques a blaster should use to resolve both routine and complex problems encountered during quarry blasting operations.