"EXPLOSIVE SELECTION - A NEW APPROACH"

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ABSTRACT

Various methods have been proposed over the past two decades to predict the borehole pressure in decoupled boreholes. In an effort to establish which characteristics best accomodate present day explosive effectiveness, a comparision has been made between two explosives. The first displays high detonation characteristics while the second produces gases which continue to fill the borehole and radial cracks for relatively long periods of time.

Results seem to verify the contention that there exists a point at which the explosives designed for high detonation pressure and temperature over time in the total thermodynamic process exhibit reduced effectiveness when compared to those blasting agents designed to produce more work generating gases. Temperature reduction of the expanding gases proceeds at a faster rate for those explosives wit higher detonation temperature and pressure than for those exhibiting high gas producing capabilities at lower temperatures and pressure.

The practicability of this type of information would be of benefit in selecting an explosive for a well designed blast.