

EMULSION COMPARISON TESTS

R. R. Rollins, Professor
West Virginia University
Morgantown, WV 26506

R. W. Givens, Mining Engineer, G. S. Williams, Mining Engineer
Geupel Construction Company, Inc.
Columbus, OH 43220

ABSTRACT

Comparison tests were performed on 6 emulsion concentrates, 3 microballoon sensitized emulsion concentrates, and 2 water gel concentrates from 8 different sources with ANFO used as a control standard. Variables measured include density, detonation, velocity, detonation pressure, calculated borehole pressure, viscosity, and lead cylinder deformation for blends of 15%, 30%, and 45% concentrate and AN/ANFO blends. Comparative results are presented for detonation velocity vs. deformation, and percentage of inherent air vs. deformation for these blends. It was hoped that these tests would serve as a tool to facilitate the comparison of different manufacturer's concentrates in AN/ANFO blends for equivalent performance characteristics and to help evaluate these products on an equal basis for bid solicitation purposes.