120-PSI BlastSeal Enhancement of Reinforced Shotcrete/Concrete Block Seals MSHA SEAL APPROVAL NUMBER 120-75.336.1.07.24.0

120-PSI BlastSeal Enhancement of Reinforced Shotcrete/Concrete Block Seals (for openings up to 11 feet high and widths greater than 16 feet)

This seal design involves the use of solid concrete block, shotcrete, reinforcing steel and BlastSeal carbon-fiber mat for the construction of a composite seal structure to withstand a 120-psi overpressure from a mine explosion. The design is intended for mine openings up to 11 feet in height and for entry widths greater than 16 feet and in areas where significant convergence is not expected.

The seal design is detailed in a report titled "120 PSI BlastSeal Enhanced Mitchell Barrett Seals" and dated October 9, 2007. The design was prepared by the structural engineering consulting firm Crosby Group. The design is certified by a registered professional engineer as being in accordance with accepted engineering practices. MSHA Seal Approval Number 120-75.336.1.07.24.0 was issued on October 25, 2007.

For detailed information on this retrofit design, contact:

Adam Brown HJ3 Composite Technologies 4100 South Fremont Avenue Tucson, Arizona 85714 Direct 847-287-2616 Toll Free: (877) 303-0453