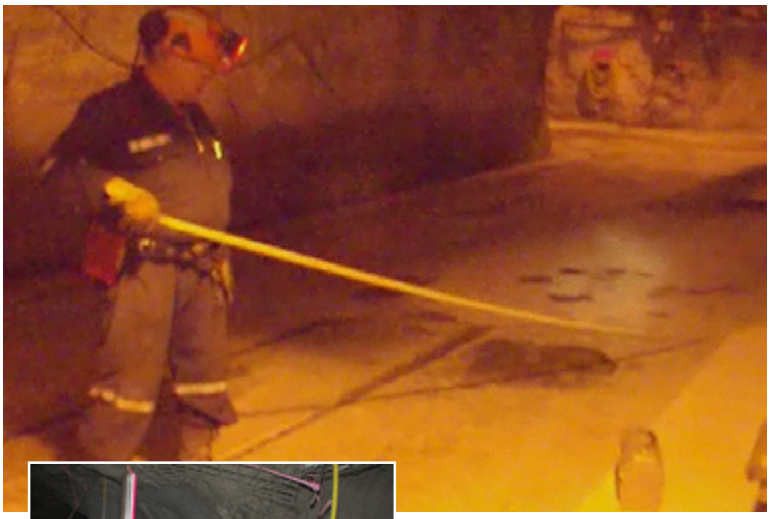
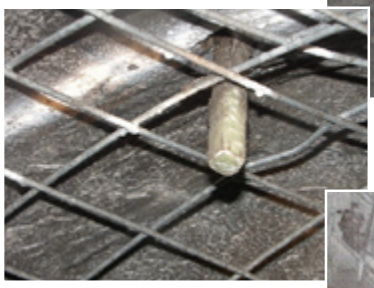
DSI Fiberglass Rebar Install At Williams Operating Corporation



DSI Ground-Lok Resin

32.5mm wing bit



Installed fiberglass repair

Custom dolly

45° fiberglass end for easy resin penetration

Square blunt and inserted into custom dolly for resin making

Williams Operating Corporation consulted DSI with regard to supporting the working face of a raise with fibreglass rebar. They wanted to have adequate support but still be able to blast without the support causing issues such as metal debris in the muck. The fibreglass option suggested by DSI would provide support required, and during the blast be consumed to such an extent that the debris would be small and inconsequential, thus not interfering with the milling process.

In January 2007, DSI successfully installed 12'2" long 7/8" diameter DSI Fibreglass Rebar at Williams Operating Corporation. The following highlights the procedure and materials used. Drilling the hole: Drilled a 12 ft hole using a stopper and 2,4,6,8,12 ft steel in sequence. The bit used was a 32.5 mm wing bit. The hole was 33 mm in diameter after being drilled. Installing the fibreglass rebar using the stopper: Inserted one 30mm x 2 ft 0-30 second ultra fast low viscosity resin cartridge to the toe of the hole. Inserted three 30mm x 2 ft low viscosity high strength 5-6 minute slow cartridges. Cartridges were tamped using a loading stick as required.

The 12'2" DSI Fibreglass Rebar was pushed by hand into the hole. A combination of lowering and raising the stopper leg and scissor lift platform was used to insert the fibreglass rebar. This was performed while spinning the rebar with the stopper. A custom (¾" 8 sided ¾" deep socket—welded to drill steel fabricated by DSI) dolly was used. The fibreglass rebar was installed leaving a 2" nub end sticking out of the back. The resin bar was fully encapsulated by the resin. This was visible at the collar. Williams Operating Corporation was satisfied with the installation and concluded that a 12'2" fibreglass rebar of 7/8" can be installed safely and successfully as a competent means of ground support in their raises.