

TUNNEL BORING MACHINE REBUILD

STILLWATER MINING COMPANY (SMC)
EAST BOULDER PROJECT, BIG TIMBER, MT
PLATINUM GROUP METAL MINE
MR. ROY AUNE

DESIGN FEES: \$15,500
COMPLETION DATE: 1998
PHONE: (406) 932-8218

PROJECT DESCRIPTION

SMC purchased a tunnel boring machine (TBM) that had been disassembled and removed from a mine in Arizona and stored above ground. SMC reassembled the TBM in a warehouse in Billings, Montana. Part of this reassembly included replacing the PLC control system with a new Allen Bradley unit and developing a control program for the unit which included functional testing and checkout. A temporary 7.2/12.47 kV power supply was installed to power the unit for checkout and test.

The TBM was then disassembled and moved to the East Boulder platinum group metals mine site where it was reassembled for service. ECI assisted with the on-site checkout and testing of the TBM as it was placed in service to develop a second fifteen-foot diameter tunnel five miles into the mountain to the ore reef.



KEY FACTS & HIGHLIGHTS

- ◆ ECI RESPONSIBLE FOR EVALUATING THE EXISTING SYSTEM AND RECOMMENDING PLC CONTROL SCHEMES
- ◆ ECI RESPONSIBLE FOR LOGIC DESIGN
- ◆ PRESSURE TRANSDUCERS
- ◆ REMOTE I/O
- ◆ EIGHT MOTORS
- ◆ INTERFACE REDI-PANEL AND DATALINER EQUIPMENT WITH PLC
- ◆ FIVE CONVEYORS
- ◆ 240 I/O POINTS
- ◆ HYDRAULIC PACK

◆ *Engineering With Distinction* ◆