

HOMESTAKE MINING COMPANY
LEAD, SOUTH DAKOTA
MR. LYNN HARDY P.E. CHIEF ELEC. ENG.

PROJECT COST: \$500,000
COMPLETION DATE: 1996
PHONE: (605) 584-4813

KEY FACTS & HIGHLIGHTS

- ◆ **ROUTE FOLLOWS AN EXISTING MINE DRIFT USING BORE HOLES TO REACH THE SURFACE**
- ◆ **ECI RESPONSIBLE FOR DESIGN, ROUTING AND CABLE SPECIFICATIONS**
- ◆ **ECI PERFORMED FULL TIME ON SITE CONSTRUCTION MANAGEMENT**
- ◆ **PROJECT COMPLETED ON SCHEDULE**



PROJECT DESCRIPTION

ECI's responsibilities for the East Substation 69 kV Transmission Line Project included conceptual and detailed design as well as verification of load studies required to properly size cable. The transmission line consists of 1,104 feet of 69 kV cable per phase. Trench was opened in the floor of the mine drift for the cable. The cable was sand bedded and placed in a delta configuration to reduce fields. 12" of concrete was placed over the trench for damage protection. A 69kV riser was attached to an overhead source. Boreholes were drilled from the surface to the precise location in the mine drift where the cables were required to rise to the surface.



**East Substation 69kV
Transmission Line**

◆ *Engineering With Distinction* ◆