

EKATI DIAMOND MINE



PROJECT DESCRIPTION

New 69 kV substation for rock crusher at Ekati Diamond Mine in the Northwest Territories. Lex designed an outdoor 3.0 MVA 69 kV to 600 V outdoor substation mounted on a skid supported by piles to protect the permafrost. Due to the environment, remoteness and ice road access, design of substation and its equipment had to be procured in a tight timeline and be easily assembled at site with limited resources.

Because of mine grounding requirements, a remote safety ground bed had to be designed and isolated from the main 69 kV ground grid to limit the grid potential rise on the mobile equipment.

HIGHLIGHTS

- New 69 kV Substation in NWT
- Transformer, breaker, and oil containment mounted on skid
- Compliance to CSA M421, Use of Electricity in Mines
- Complicated grounding issues required isolated ground safety bed
- Environment, remoteness and ice roads considerations in final design

LOCATION

Ekati, NT