

## PROJECT DESCRIPTION

Dannemora Mineral AB

Dannemora, Sweden

The Dannemora mine has been in production since (at least) 1481 until its first closure in 1992. The fact that the mine is very old, but also has been closed for some time, has influenced the infrastructure and mine planning during the earlier era of mining. At the re-start of the mine in 2012, several rock mechanical issues were identified, due to both the complex ore geometries and old mine planning, including: (i) position and stability of old drift ramps, (ii) stability of the existing shafts, (iii) impact on surface from future mining activities, (iv) distance between new and old orebodies and stopes, (v) stability of older, open existing stopes while re-starting mining activities, and (vi) rock stresses.

## ITASCA'S ROLE

Itasca Consultants AB has supported the mine with rock mechanics expertise for mine planning including mining sequences for different mining levels, location of ramps, rehab of re-opened areas, etc. Itasca also took a more direct role in solving production problems on daily basis, for example designing reinforcement, taking care of wall or roof collapses, etc. Itasca also provided short training courses in rock mechanics for mine engineers, geologist and shift crews.

## PROJECT RESULTS

The mine educated all miners in rock mechanics and started up different monitoring programs in different critical areas. Parts of the old infrastructures has been reinforced following designed reinforcement systems based on rock quality and damage mapping. Some re-direction of infrastructure is completed, and changed mining sequences is also completed at some mining levels but also between different levels.

