

CIVIL • ENVIRONMENTAL • MANUFACTURING • **MINING** • OIL & GAS • POWER GENERATION

PROJECT DESCRIPTION

LKAB
Boliden
Björkdalsgruvan

Sweden

Open pit mining often result in high rock slopes, sometimes combined with difficult rock conditions. This is further augmented by large blasting rounds resulting in high vibrations. Reinforcement of pit slope walls is also difficult and many times associated with high costs and loss of production. Bench slope stability is vital for a safe working place for all personnel in the mine as well as for avoiding production loss. Itasca Consultants AB is providing technical, on-site rock mechancis expertise to several open pit mines in northern Sweden.

ITASCA'S ROLE

The work includes visual slope stability inspections on site, support and recommendations to the production management for direct actions to ensure bench and slope stability using different support and rehabilitation methods. We also provide adaptation of drill-and-blast plans to reduce blast damage, planning of slope monitoring, and exploration drilling for determining rock mechanical parameters. Inspections of underground facilities such as pump stations and conveyor belt tunnels has also been a part of the commitments to the open pit mines.

PROJECT RESULTS

The result is primarily safe working conditions in the pits but also less disturbance in ore production for the near future as well as in the long term perspective resulting in reduced costs for unplanned actions to maintain slope stability.



Discussion at site with production management (left) and working ramp for slope rehabilitation (right)