

Pilot Scale Erosion Control Using Bioengineering Techniques at Gold Run Creek

By Laberge Environmental Services

NON-TECHNICAL SUMMARY

Disturbance of frozen ground, through placer mining activities, may lead to slope failure. A stockpile of frozen overburden has recently begun eroding from the formation of a runoff channel. A large cut, approximately 300 metres long and up to 50 metres deep has been created adjacent to Gold Run Creek, a heavily mined area southeast of Dawson City.

This stockpiled overburden has been in place for several years and has revegetated with several species of mature willows (age dated to 15 years). Either due to heavy rainfall or climate change, melting has commenced in the stockpile resulting in the formation of a runoff channel. This has increased in size and slope failure continues to enlarge the cut.

Laberge Environmental Services conducted a reconnaissance survey of the site in July 2003, to assess the site with the purpose of exploring ways of halting the slope failure and stabilizing the disturbed section of overburden. In the fall of 2005, several bioengineering structures were installed to assist in controlling the erosion. Retaining walls were installed on the side walls and the face of the cut, and a live willow flume was built to direct and reduce the velocity of the water entering the cut.