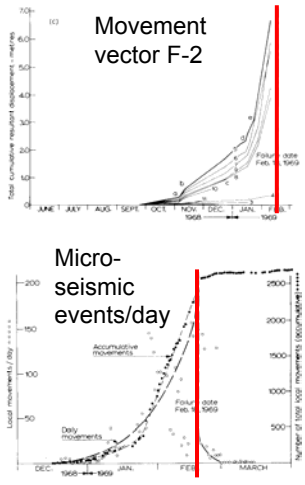
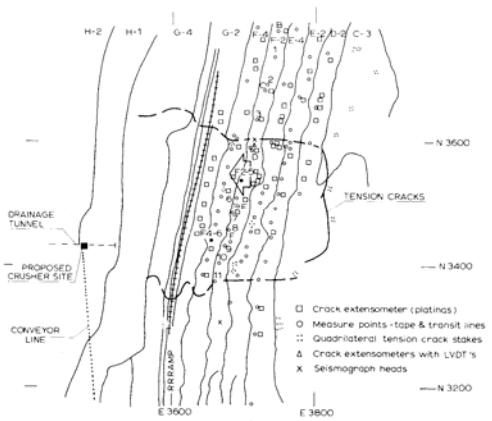
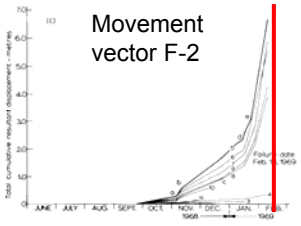
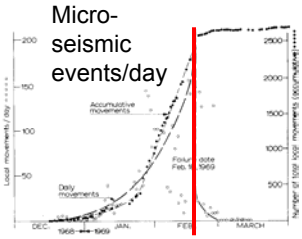
Chuquicamata Mine, Chile, 1968

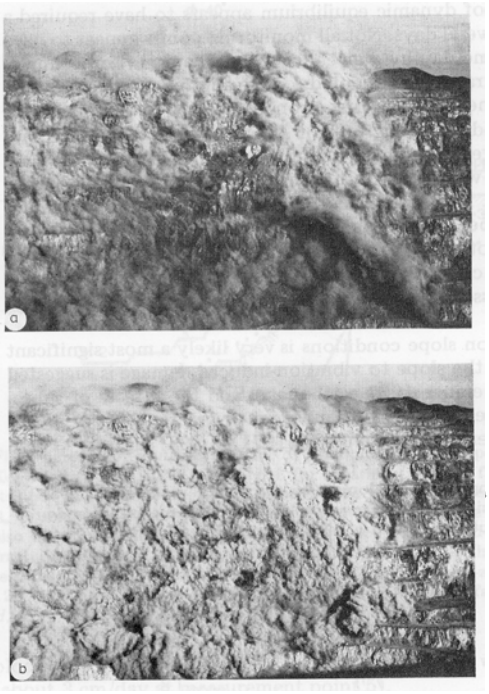




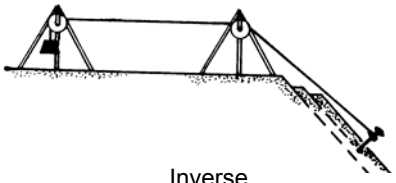
Chuquicamat
Chile, 19

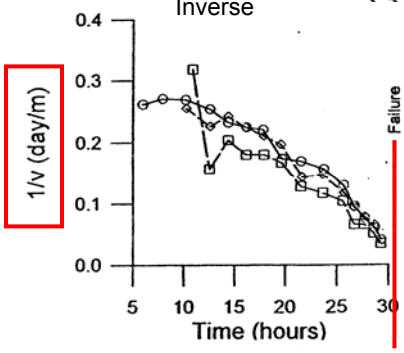


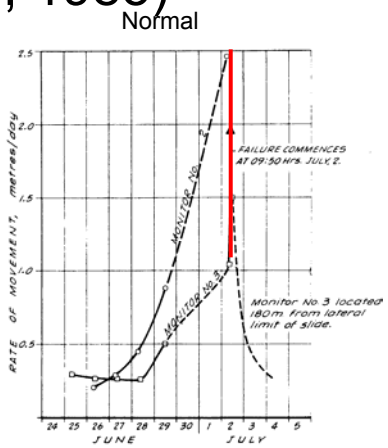




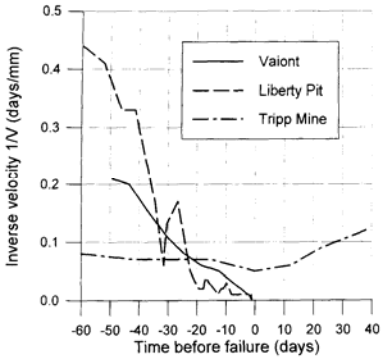
Inverse Velocity Method
(Fukuzono, 1985)



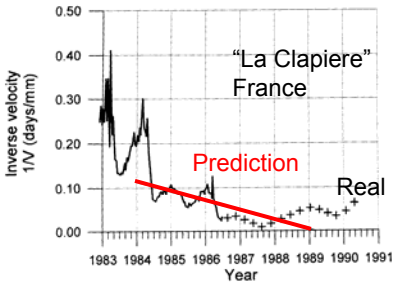


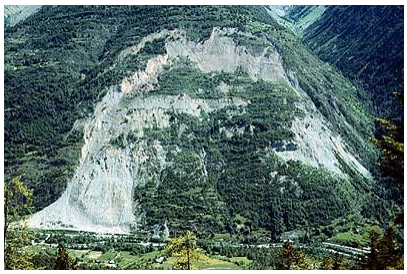


Inverse Velocity Method, more examples

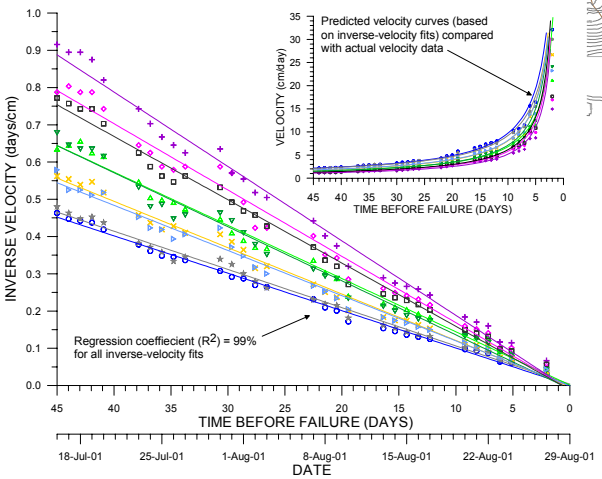


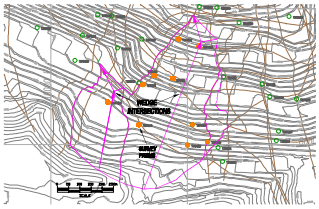
Tripp Mine: slow failure



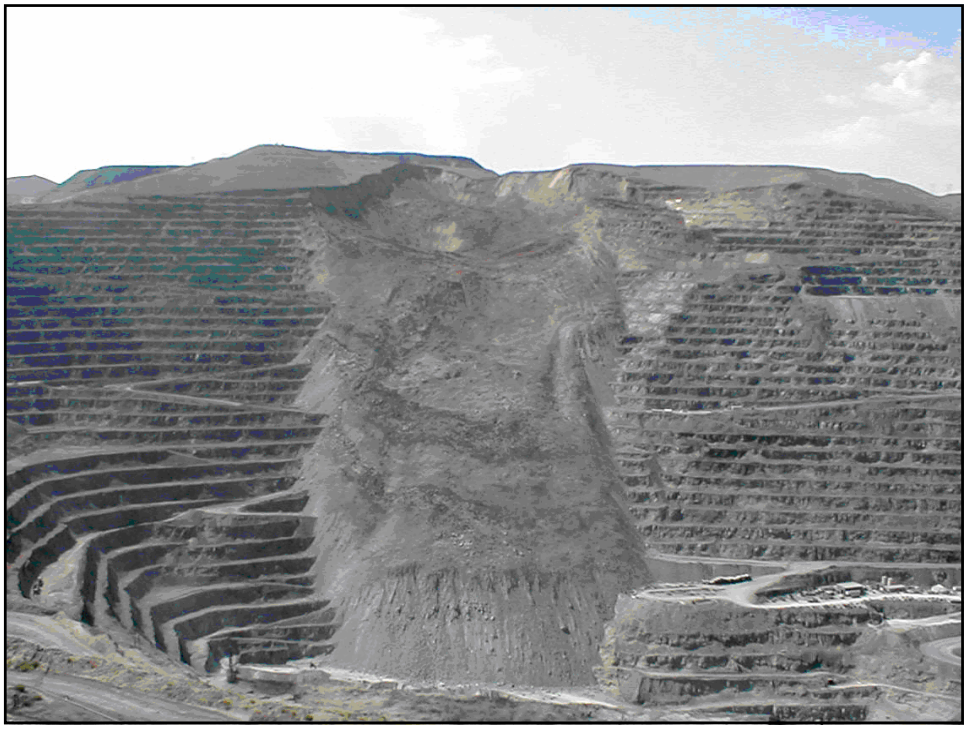


Inverse Velocity Method, another example



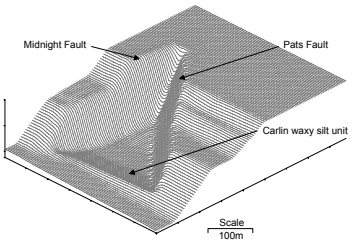


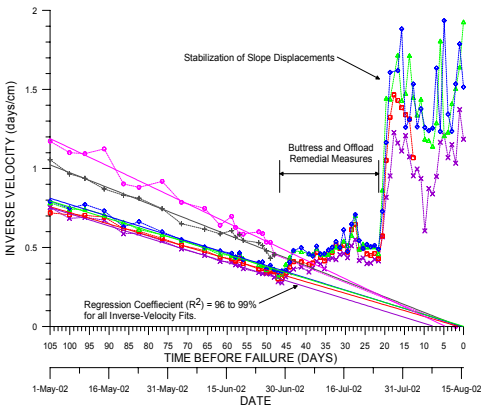
18 million m^3 pit slope failure prediction (Rose and Hungr, 2006)



Use of inverse velocity to monitor stabilization progress (Rose and Hungr, 2006)

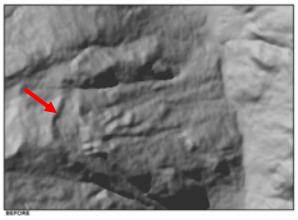
Two faults and a pre-sheared silt layer, 3 million m^3

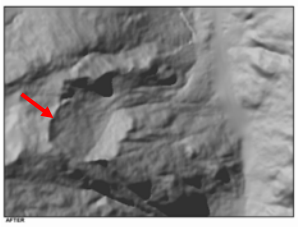




Total Displacement?

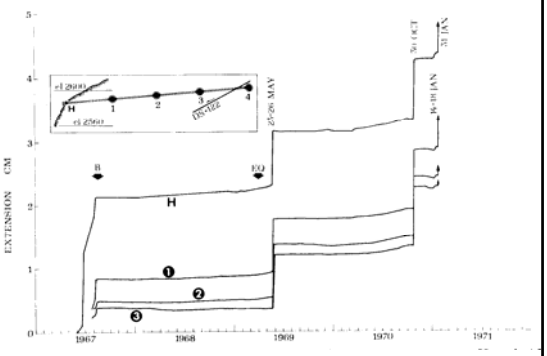
100 m pre-historic movement





ValPola rock avalanche, 1986

Small rock slides

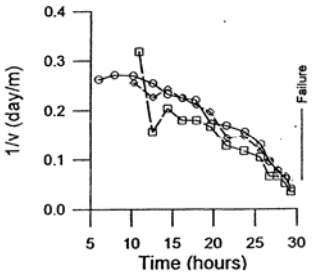


Libby Dam, Montana, 1971

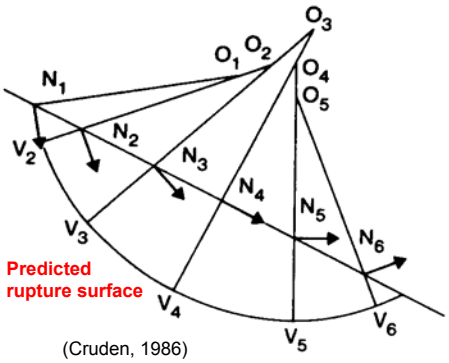
Prediction not feasible

Purpose of monitoring

1) Movement detection, failure prediction



2) Vector solutions, interpretation of failure mechanism



(Cruden, 1986)