THE EFFECT OF SUBSURFACE MINING
ON THE LAND SURFACE
AND PRELIMINARY CALCULATION OF PILLARS

K. LAIGNA
Estonian Maritime Academy
Mustakivi Road, 13912 Tallinn, Estonia

A. RAUKAS
Institute of Geology at Tallinn Technical University
7 Estonia Avenue, 10143 Tallinn, Estonia

In Estonia oil shale is produced by underground and surface mining. The technologies used exert a substantially different effect on the topography and water regime. The cavities generated by subsurface mining may lead to a series of deformations that travel to the land surface and hamper further use of mined-out areas. Based on mathematical calculations, prognostication of ground subsidence in dependence of pillar sizes is attempted.