To apply this model, we need to know horizontal and vertical velocities, temperatures and longitudinal temperature gradients at the surface, and the geothermal flux. As in the flow-path calculations, the velocities are determined from the equations given in Table II for model 2, and the geothermal flux was assumed to be between 0.95 and 1.8 μcal cm^{-2} s^{-1} (3.97 and 7.5 μJ cm^{-2} s^{-1}). Surface (20 m) temperatures were measured in six 30 m bore holes in July 1973 (Fig. 6). Longitudinal temperature gradients at the glacier surface, $d\theta_s/dx$, are calculated from these temperature data.