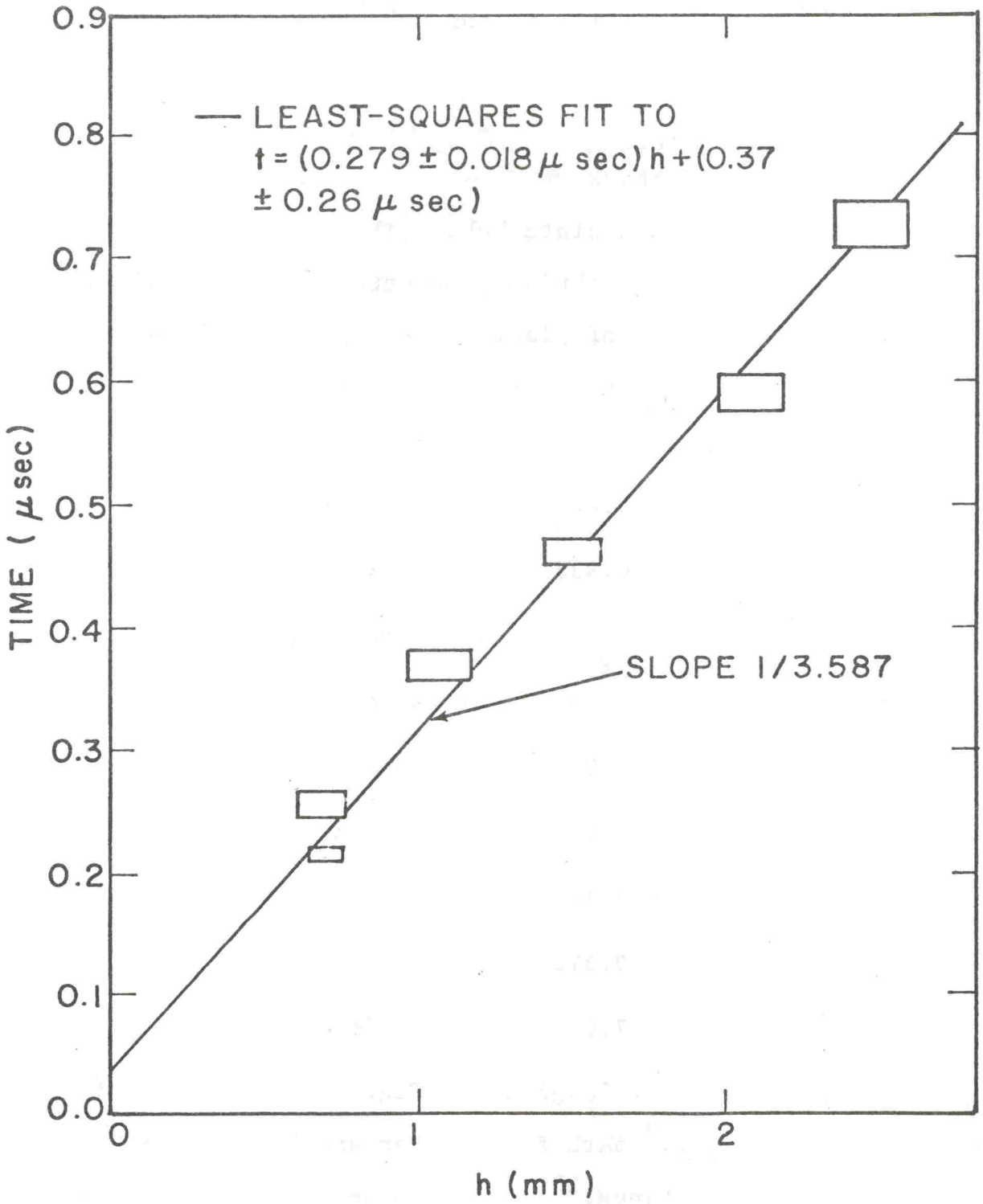

Fig. 4.6.--Corrected Lagrangian h-t diagram for beginning of the plastic II front.

corresponds to a velocity of 3.587 ± 0.227 mm/μsec, which is slightly less than that obtained for the uncorrected data of Fig. 4.5.

4.3.3. Stress-Volume State Behind the Plastic II Shock

The stress-volume state behind the plastic II shock was calculated using the equilibrium jump equations, Eqs. (2.4) and (2.5); weighted averages of plastic I and plastic II particle velocities; and Lagrangian shock velocities from the preceding section:

$$u_1 = 0.032 \pm 0.005 \text{ mm/μsec},$$

$$u_2 = 0.333 \pm 0.004 \text{ mm/μsec},$$

$$u_3 = 0.565 \pm 0.018 \text{ mm/μsec},$$

$$U_1' = 6.18 \pm 0.21 \text{ mm/μsec},$$

$$U_2' = 5.074 \pm 0.045 \text{ mm/μsec},$$

$$U_3' = 3.587 \pm 0.227 \text{ mm/μsec},$$

$$P_3 = 201 \pm 8.4 \text{ kbar},$$

$$V_3/V_0 = 0.871 \pm 0.008,$$

$$V_0 = 7.098 \pm 0.011 \text{ cc/mol}.$$

This stress-volume point is given in Fig. 4.7 along with data from Bancroft, et al.,[2] data from Barker and Hollenbach,[15] and Andrews' equilibrium curve.[27] It is reasonably consistent with the Bancroft data and the Barker data.