



FIGURE 46.—Photographs showing the sustained damage in the towns of: A, Joyabaj; B, Comalapa; C, Tecpan; and D, San Martin Jilotépeque.

Using this equation, one determines the expected magnitude for the Guatemalan earthquake by substituting the field observations of $L=300$ km and the average horizontal fault displacement $\bar{u}=100$

cm (Plafker and others, this report). This yields a magnitude of 7.4. If King and Knopoff's expression (modified from Tocher) is used,

$$\log L\bar{u}^2 = 2.75 M - 8.93, \quad (2)$$