

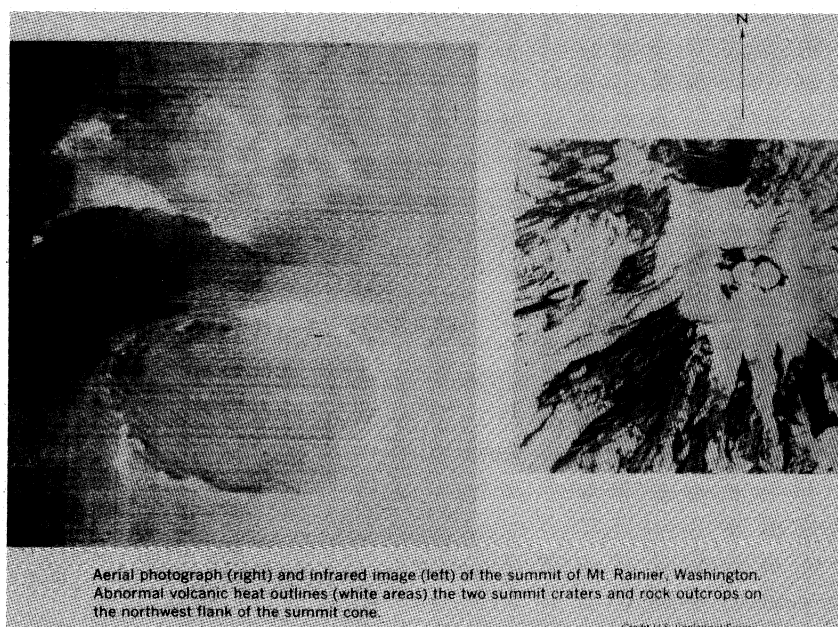


FIGURE 26

Infrared techniques have also been used to survey the Kilauea volcano in Hawaii, Taal volcano in the Philippines, and Irazu volcano in Costa Rica. The aerial inspections of Kilauea and Taal suggest that detectable changes in thermal emission precede some eruptions by as much as eight months.

Our scientists are applying both infrared and radar techniques to their study of geologic hazards associated with the San Andreas fault in California. This effort is an adjunct to other Geological Survey studies that are predicated on the proposition that earthquakes are predictable. Readings with these new tools are adding to our understanding of the history of movement along the San Andreas fault, and hopefully, we will soon be able to interpret them in terms of the dynamics of earthquake regions. The radar image, shown in figure 27 is an example of the kind of small-scale imagery that is becoming a valuable aid in studying potential geologic hazards to obtain guidelines for safe urban development.