Explanation

This preliminary map shows traces of the Imperial Fault that have been active in historic time. Many of the fault traces shown are known to have been active during and possibly after the earthquake of 19 May 1960. Data used to compile this report were partly taken from vertical air photo survey flown by the U.S. Geological Survey in 1960. Other data were taken from local field maps, and maps published by state and Federal agencies. Data were compiled from the Monopoly, the Monopoly State Line (Imperial Valley), and the Imperial Valley (California) boundary and from the level federal oblique pictures between Barstow, CA, and Lucerne Valley. Some data on locations of fault traces northwest of that point were taken from 1937, 1953, 1960, and 1976 vertical air photos. The entire fault trace has been field checked. The map also shows roads, railroads, and other linear features. The map provides data for the study of faulting in the Imperial Valley and is intended for use in planning road pavements and concrete-lined irrigation canals. Where northings are used, westings are 1,000 in. Northings are used, westings are 1,000 in.

Symbols used

Solid lines: traces of 1900 fault surface rupture and earlier Holocene fault traces, interpreted from 1952 aerial photography or from 1900 fault scars. Determined from offset concrete linings of canals and road pavements.

Continuous dashed line: probable trace of 1960 fault surface rupture, based on unpublished 1960 field notes of C. F. Riddle.

Dotted line: probable traces of 1900 or earlier Holocene faults unconfirmed by direct evidence such as stream terraces, ground observance, or unpublished notes on the 1960 earthquake rupture by C. F. Riddle. Many of the segments shown with this symbol are placed in this category as a result of recent agricultural or land grading activity which has obscured evidence of faulting.

Acknowledgements

Acknowledgments for the present authors are from C. R. Allen of The California Institute of Technology.

HOLOCENE TRACES OF THE IMPERIAL FAULT IN SOUTH-CENTRAL IMPERIAL COUNTY, CALIFORNIA

By Robert V. Sharp

1977