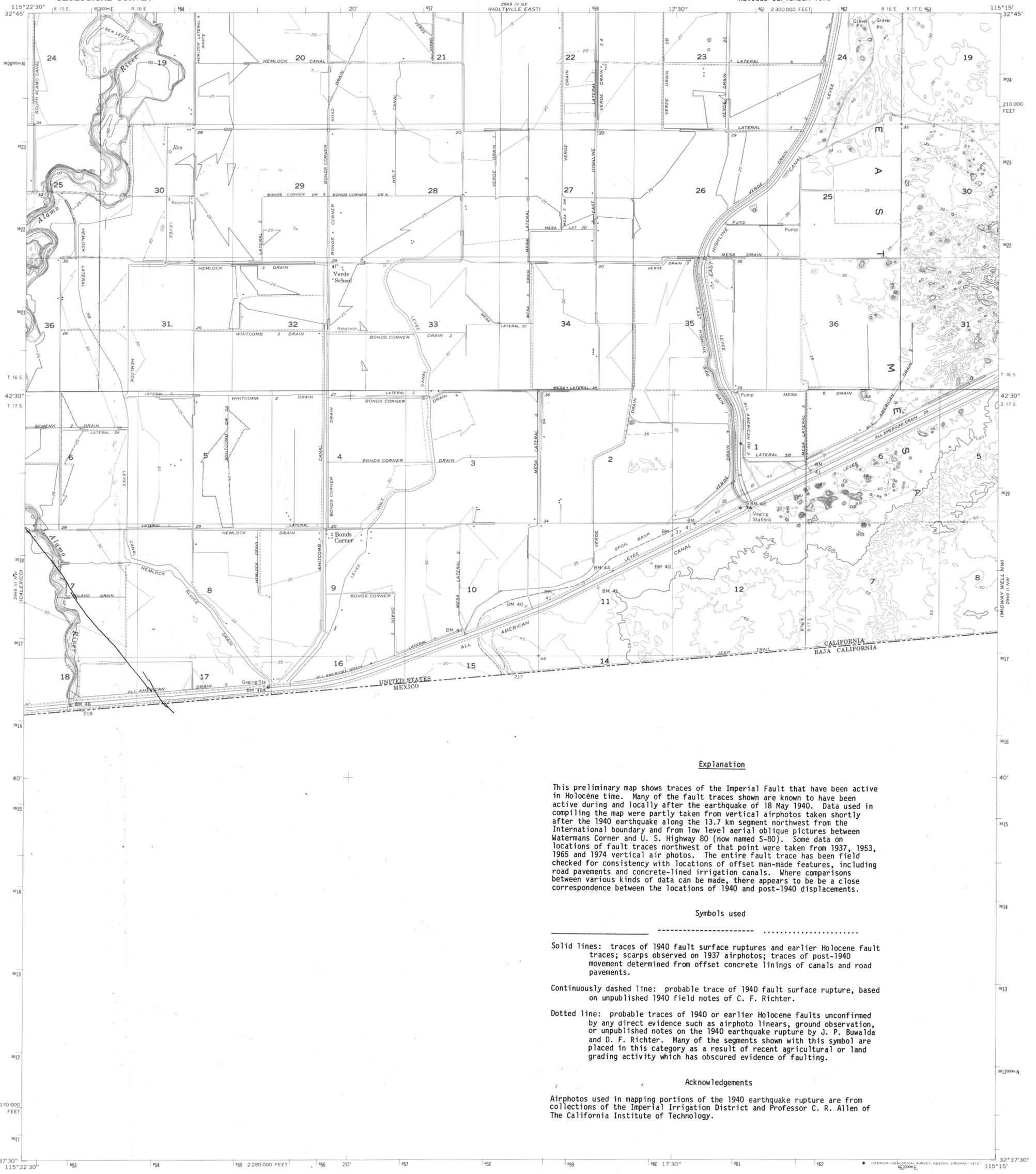


UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



Explanation

This preliminary map shows traces of the Imperial Fault that have been active in Holocene time. Many of the fault traces shown are known to have been active during and locally after the earthquake of 18 May 1940. Data used in compiling the map were partly taken from vertical airphotos taken shortly after the 1940 earthquake along the 13.7 km segment northwest from the International boundary and from low level aerial oblique pictures between Watermans Corner and U. S. Highway 80 (now named S-80). Some data on locations of fault traces northwest of that point were taken from 1937, 1953, 1965 and 1974 vertical air photos. The entire fault trace has been field checked for consistency with locations of offset man-made features, including road pavements and concrete-lined irrigation canals. Where comparisons between various kinds of data can be made, there appears to be a close correspondence between the locations of 1940 and post-1940 displacements.

Symbols used

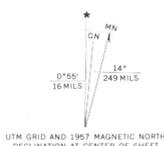
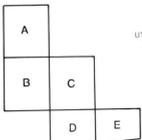
- Solid lines: traces of 1940 fault surface ruptures and earlier Holocene fault traces; scarps observed on 1937 airphotos; traces of post-1940 movement determined from offset concrete linings of canals and road pavements.
- Continuously dashed line: probable trace of 1940 fault surface rupture, based on unpublished 1940 field notes of C. F. Richter.
- Dotted line: probable traces of 1940 or earlier Holocene faults unconfirmed by any direct evidence such as airphoto linears, ground observation, or unpublished notes on the 1940 earthquake rupture by J. P. Buwalda and D. F. Richter. 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

Airphotos used in mapping portions of the 1940 earthquake rupture are from collections of the Imperial Irrigation District and Professor C. R. Allen of The California Institute of Technology.

USGS QUADRANGLES

- A - BRAWLEY
- B - EL CENTRO
- C - HOLTVILLE WEST
- D - CALEXICO
- E - BOIDS CORNER



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

By Robert V. Sharp

1977

This map is preliminary and has not been reviewed for conformity with U.S. Geological Survey standards and nomenclature.