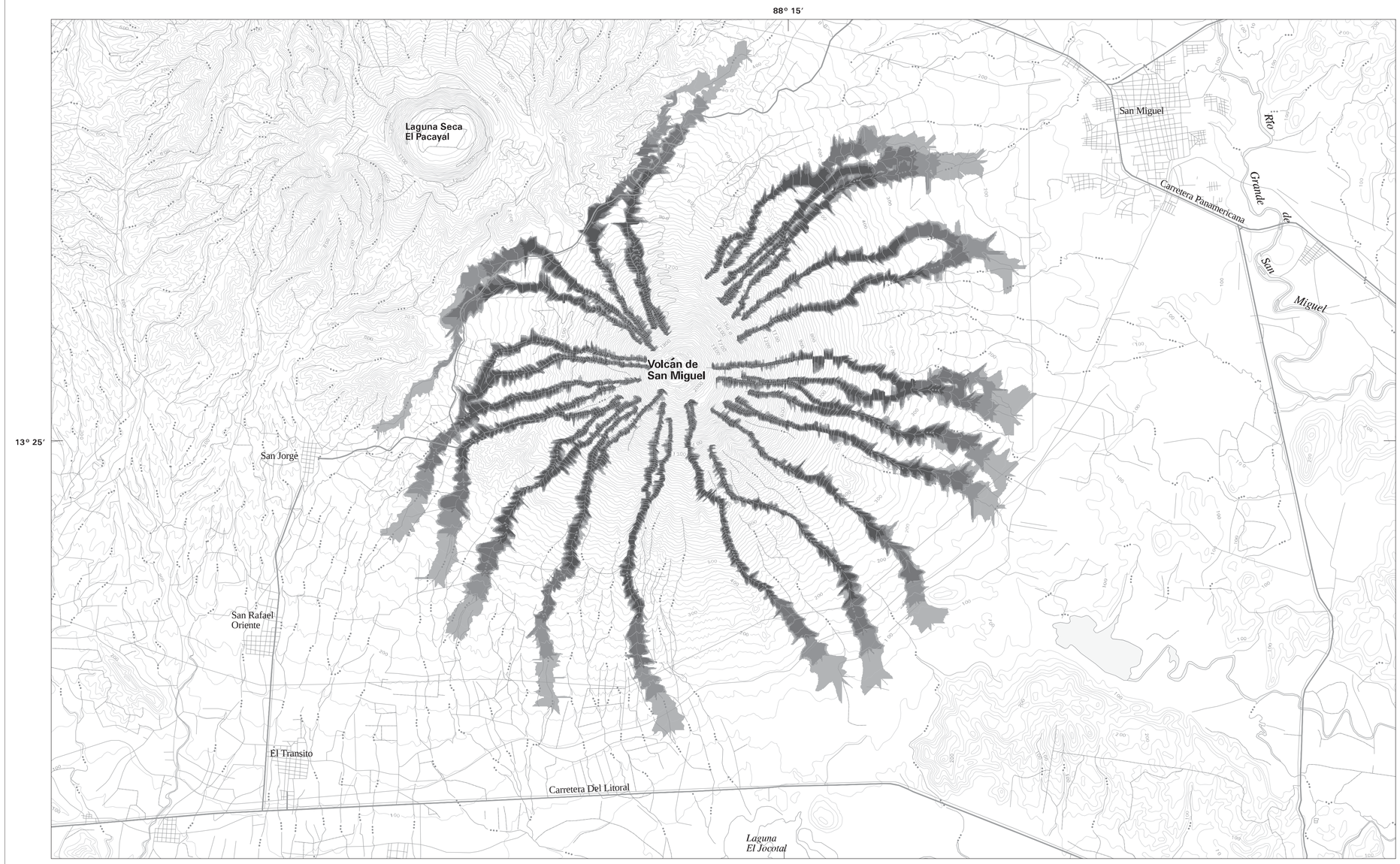
U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

OPEN-FILE REPORT 01-395
PLATE 1



EXPLANATION

Lahar Hazard Zones

Channels that head on San Miguel volcano are subject to lahars generated by debris avalanches, torrential rains, earthquakes, etc. The lahar hazard zones are subdivided into four zones on the basis of a range of hypothetical lahar volumes [4].

- Area that could be inundated by a lahar having a volume of 100,000 cubic meters. Highest probability.
- Area that could be inundated by a lahar having a volume of 300,000 cubic meters.
- Area that could be inundated by a lahar having a volume of 500,000 cubic meters.
- Area that could be inundated by a lahar having a volume of 1 million cubic meters. Lowest probability.

Location Map

NOTE: Although the map shows sharp boundaries for the lahar-hazard zones, the degree of hazard does not change abruptly at these boundaries. Rather, the hazard decreases gradually as distance from the volcano and elevation above the valley floor increases (small volume lahars are more common than large volume lahars). Areas immediately beyond outer lahar-hazard zone should not be regarded as hazard-free, because the boundaries can be located only approximately, especially in areas of low relief. Many uncertainties about the source, size, and mobility of future lahars preclude locating the boundaries of zero-hazard zones precisely.

Numerals in brackets refer to end notes in the report.

Base maps from El Salvador 1:50,000 scale series; Usulutan quadrangle, 1983 (2556 III); San Miguel quadrangle, 1983(7) (2556 II) from best available source. Digital Bases Maps from Titan Averstar, Inc. Universal Transverse Mercator projection, Zone 16, Horizontal Datum North American 1927, Vertical Datum Mean Sea Level, Spheroid Clarke 1866.

Scale 1:50,000

0 1 2 3 4 MILES
0 1 2 3 4 KILOMETERS

Contour Interval 20 Meters

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Lahar Hazard Zonation for San Miguel Volcano, El Salvador

by

J.J. Major, S.P. Schilling, C.R. Pullinger, C.D. Escobar, C.A. Chesner, and M.M. Howell

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