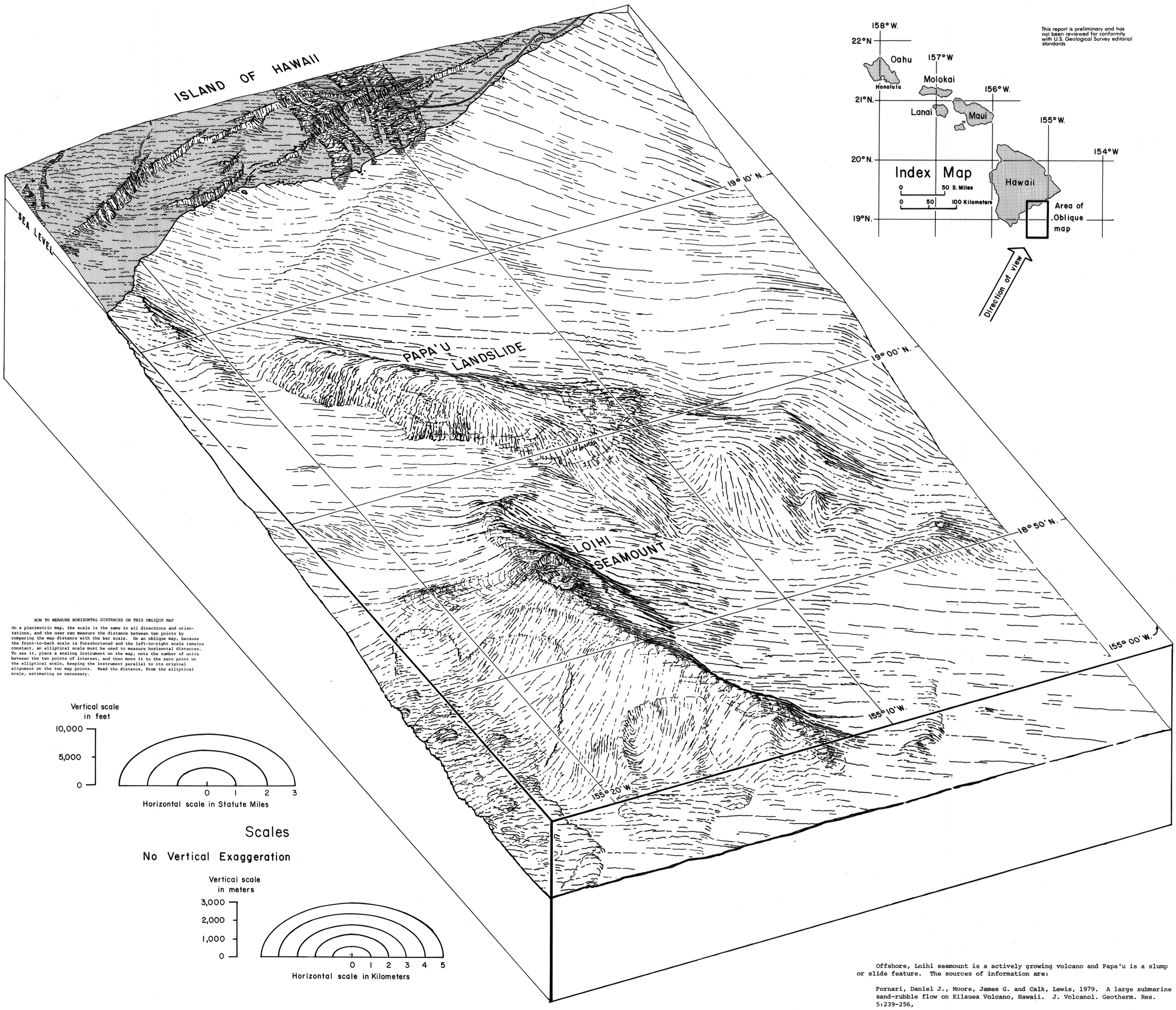
Department of the Interior
United States Geological Survey

Open-File Report 82-463



HOW TO MEASURE HORIZONTAL DISTANCES ON THIS OBLIQUE MAP

On a planimetric map, the scale is the same in all directions and orientations, and the user can measure the distance between two points by comparing the map distance with the bar scale. On an oblique map, because the front-to-back scale is foreshortened and the left-to-right scale remains constant, an elliptical scale must be used to measure horizontal distances. To use it, place a scaling instrument on the map, note the number of units between the two points of interest, and then move it to the zero point on the elliptical scale, keeping the instrument parallel to its original alignment on the two map points. Read the distance, from the elliptical scale, estimating as necessary.

Scales

No Vertical Exaggeration

Onshore, lava flows are from Mauna Ulu 1969-1974 eruption and they flow over the Hilina Pali fault system. The sources of information are:

U.S. Geological Survey, 7.5 Minute Quandrangle series, Maps 1:24,000, Kalapana, 1981, Kau Desert, 1981, Naliikakani Point, 1963, and Makaopuhi Crater, 1981.

Offshore, Loihi seamount is a actively growing volcano and Papa'u is a slump or slide feature. The sources of information are:

Fornari, Daniel J., Moore, James G. and Calk, Lewis, 1979. A large submarine sand-rubble flow on Kilauea Volcano, Hawaii. J. Volcanol. Geotherm. Res. 5:239-256,

Moore, James G., Clague, D. A., and Normark, W. R., 1982, Diverse basalt types from Loihi seamount, Hawaii, Geology, v. 10, p. 88-92.

U.S. Dept. of Commerce, National Ocean Survey, unpublished sounding data.

U.S. Dept. of Interior, U.S. Geological Survey, Seismic and precision depth recorder profiles, S.P. LEE, 1976, S.P. LEE, 1978 and KANA KEOKI , 1981.

Oblique map of Loihi seamount and Papa'u landslide, Hawaii

by

Tau Rho Alpha, James M. Morley, Christina E. Gutmacher, and William A. Austin

1982