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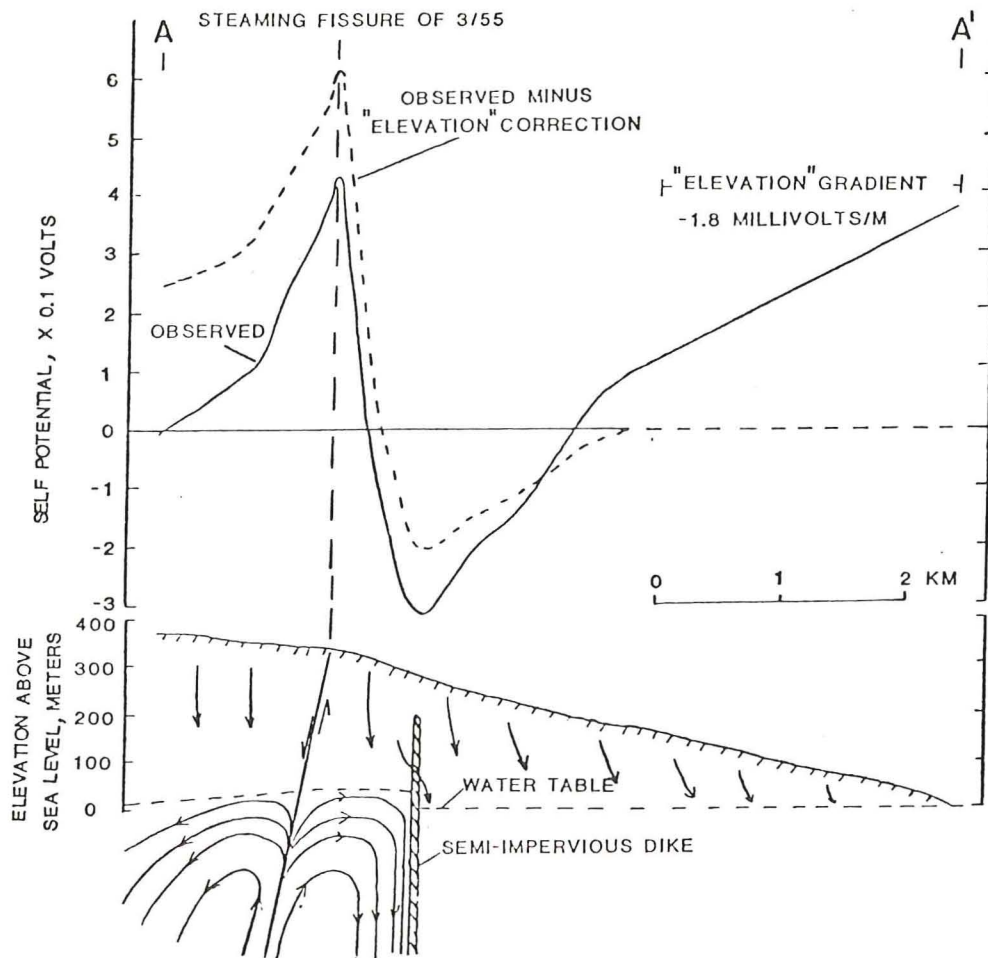


Figure 4 Self-potential profile (solid) along traverse A-A' (Fig. 2) and modified profile (dashed) after removal of an "elevation" gradient. The cross section shown below the profile is a conceptual model of the hydrology and substructure that may account for the potential distribution as discussed in the text. Arrowed-lines below water table are idealized streamlines of fluid (liquid and vapor) flow, and above water table, are downward migration of meteoric water.

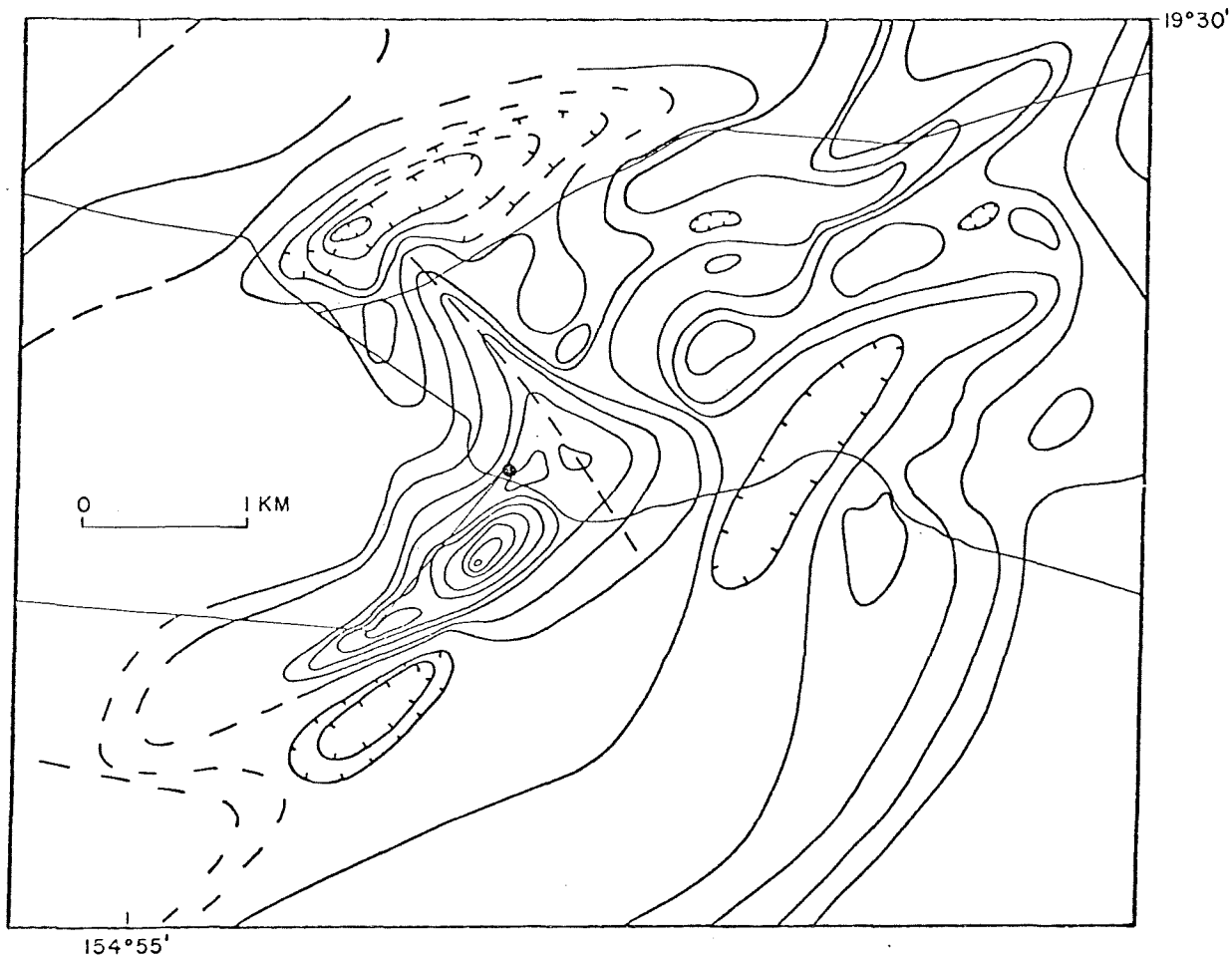


Figure 5 Detailed contour map of the self-potential distribution in the vicinity of the geothermal drill hole (solid circle). Contour interval is 50 mV (see Fig. 2 for absolute values); contours are dashed where inferred. Hachures indicate closed lows (negative potentials); thin lines indicate location of major roads in the area; dashed line through anomaly C (Fig. 2) is projection of inferred transform fault.

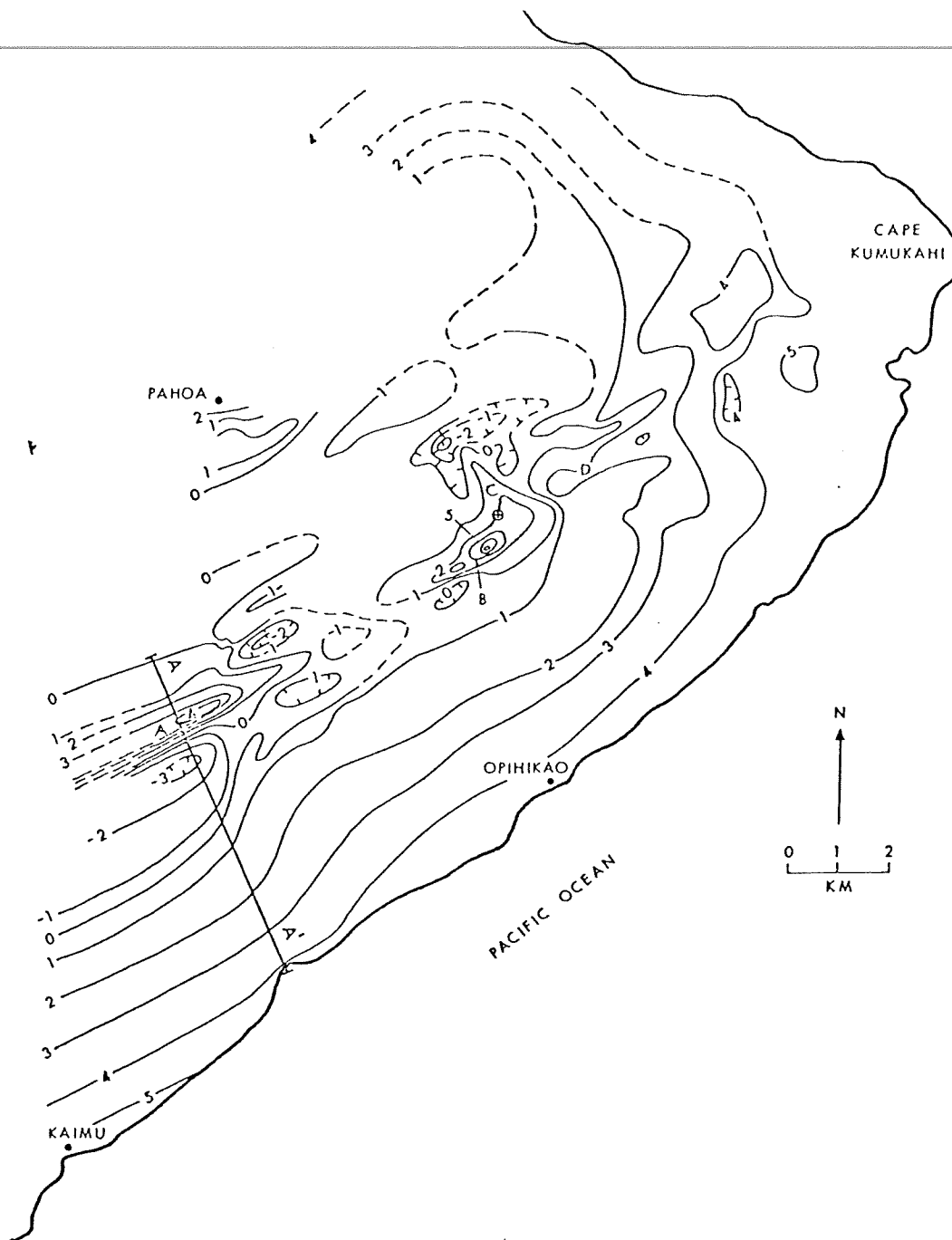


Figure 2 Contour map of the self-potential distribution in the area of Kilauea's lower east rift zone (dashed where inferred). Hachures indicate negative potentials. Each unit contour interval represents 0.1 V. A-A' traverse (barred line) indicates location of profile shown in Figure 4. Crossed circle shows location of the University of Hawaii's geothermal drill hole. Shaded areas, labeled A, B, C, and D, are the same as in Figure 1.

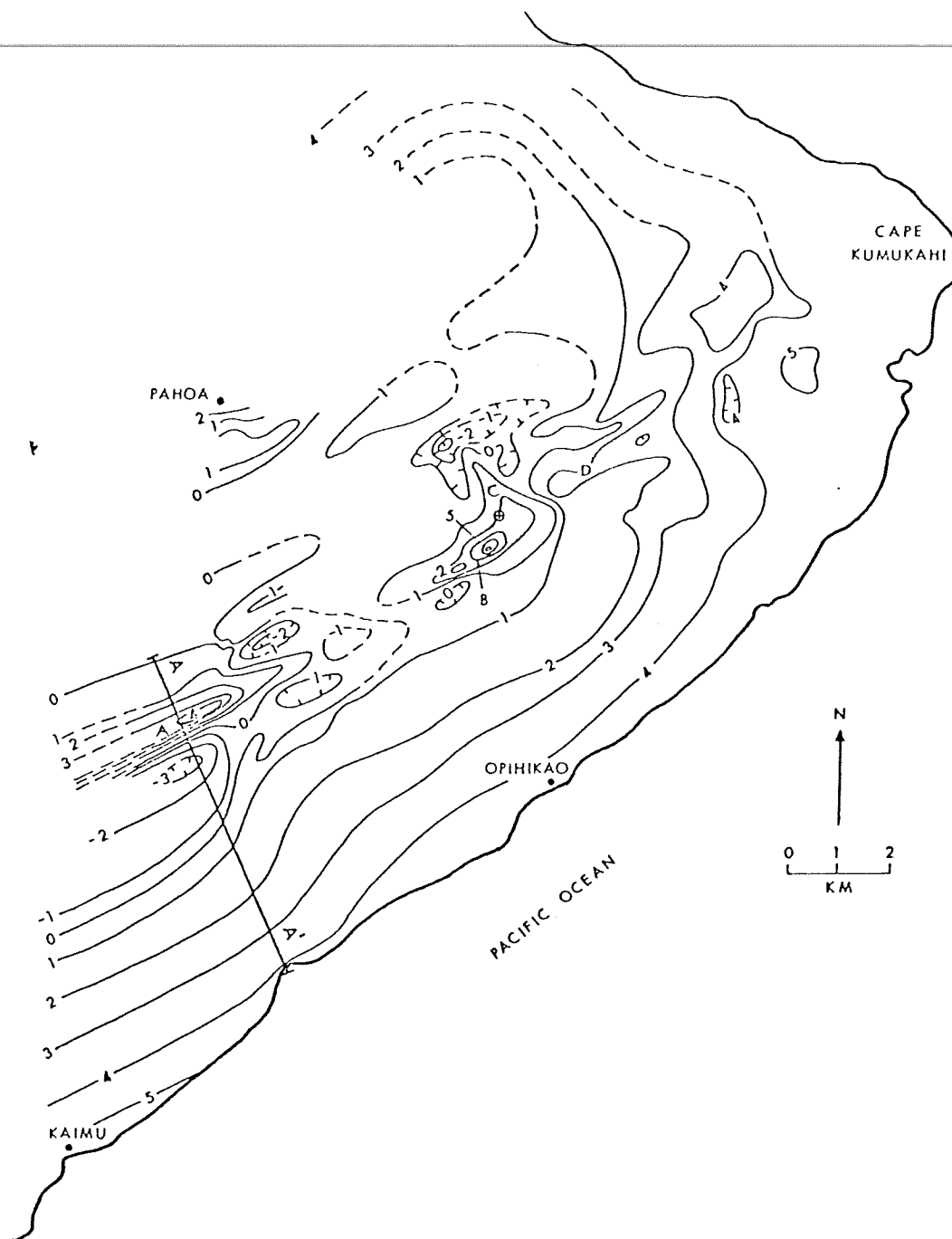


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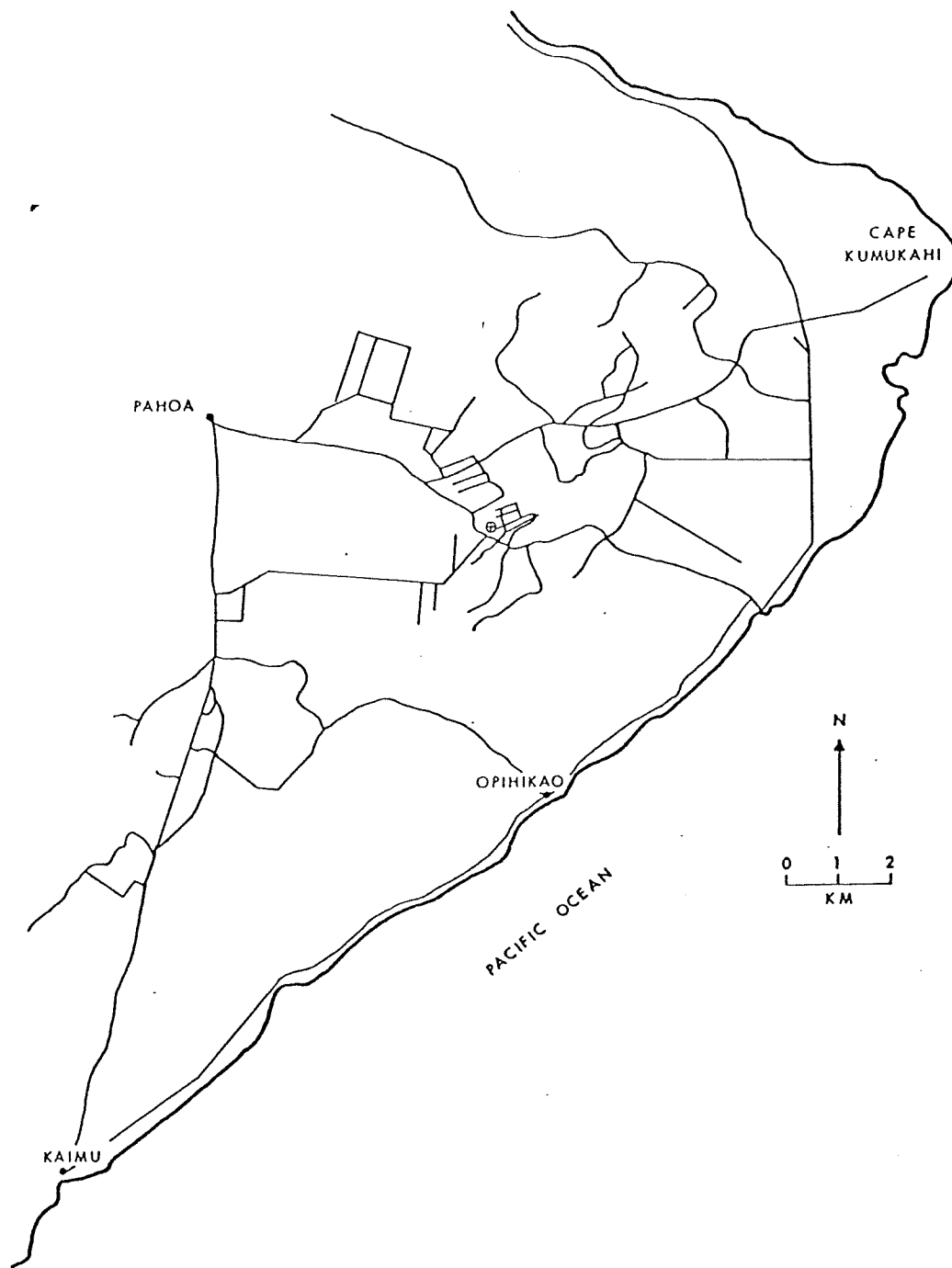


Figure 3 Map showing location of traverses along which self-potentials were measured. Crossed circle shows location of the geothermal drill hole.

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