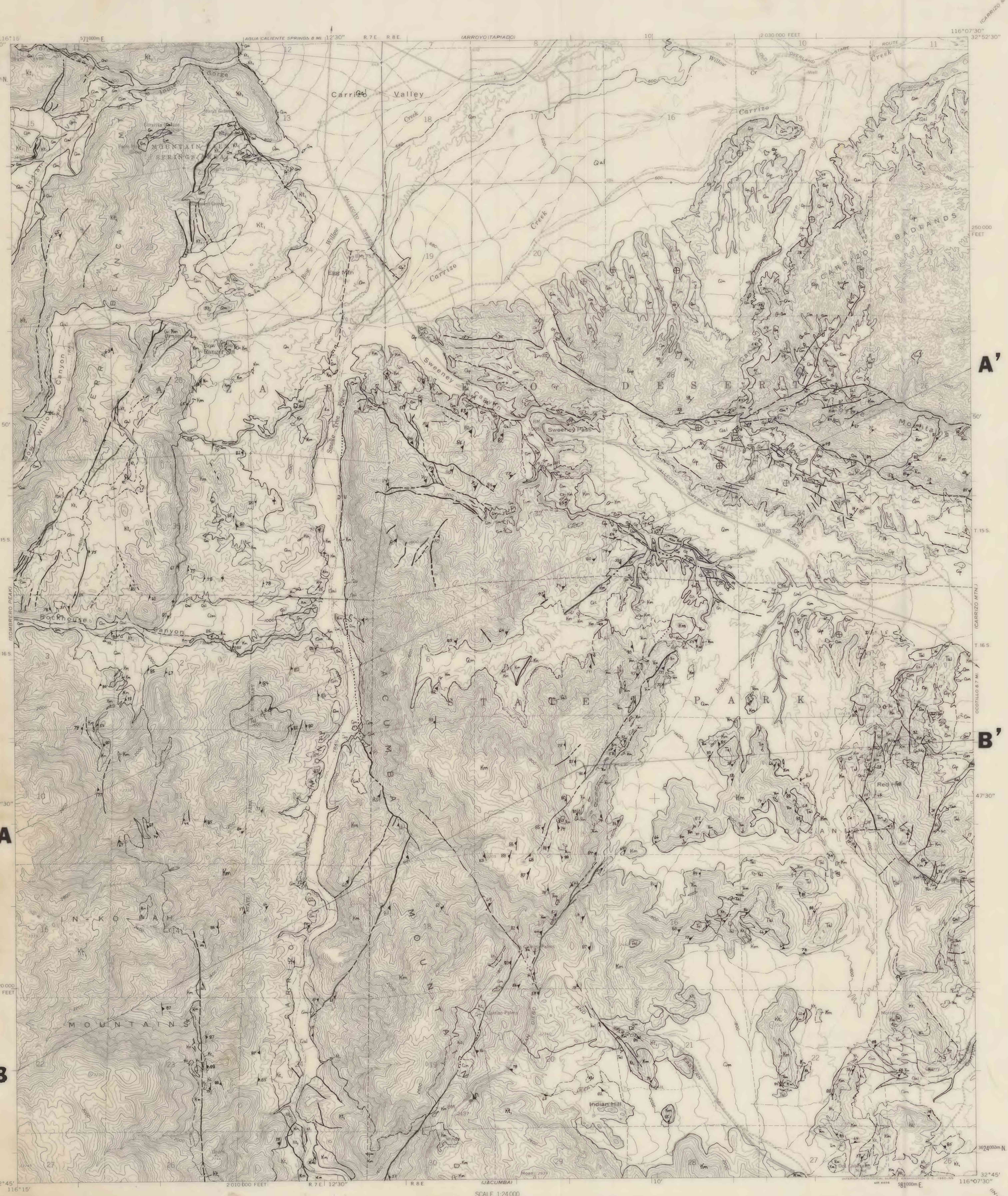
DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

OPEN FILE REPORT
79-754



BASE FROM
U. S. GEOLOGICAL SURVEY
1959

SCALE 1:24000
CONTOUR INTERVAL 40 FEET
DOTTED LINES REPRESENT 20-FOOT CONTOURS
DATUM IS MEAN SEA LEVEL

APPROXIMATE MEAN DECLINATION, 1959

GEOLOGY MAPPED IN
1975-1978

QUADRANGLE LOCATION

EXPLANATION

Quaternary

Qal — Alluvium (sand and gravel)

Qm — Mesa Conglomerate (massive or torrentially-bedded very coarse boulder conglomerate near mountain fronts; poorly-bedded sandstone and conglomerate alluvial outwash deposits; silt-and sandstone; late Pleistocene to Recent(?))

Qp — Palm Spring Formation (fine- to coarse-grained arkosic arenite alternating with discontinuous lensing mud- and siltstones of various colors; early-middle Pleistocene)

Qc — Canebrake Formation (pebble to boulder conglomerate; marginal equivalent of Palm Spring Formation)

Tertiary

Tal — Alverson Andesite (basaltic and andesitic flows, breccia, and intercalated volcaniclastic rocks; Miocene (K-Ar = 16.9 ± 0.5 m.y.)) — Miocene

Tan — Anza Formation (poorly bedded coarse arkosic sand with conglomeratic lenses, grading upward into increasingly volcaniclastic-rich beds underlying Alverson Andesite) — Miocene (?)

Cretaceous

Kt_1 — Tonalite (biotite tonalite with color index of 8-14 percent "La Posta tonalite")

Km — Gneissic and Metasedimentary rocks (hybrid gneiss and variably migmatitic Triassic (?) metasedimentary rocks in both interlayered and gradational relation)

Kc — Cuyamaca Gabbro (small bodies of heterogeneous, gneissic gabbro)

Triassic (?)

Tm — Marble (metamorphosed limestone and dolomite of Triassic (?) age, occurring as pods and lensoidal beds in Km)

Contact, dashed where approximately located, queried where indefinite, dotted where concealed

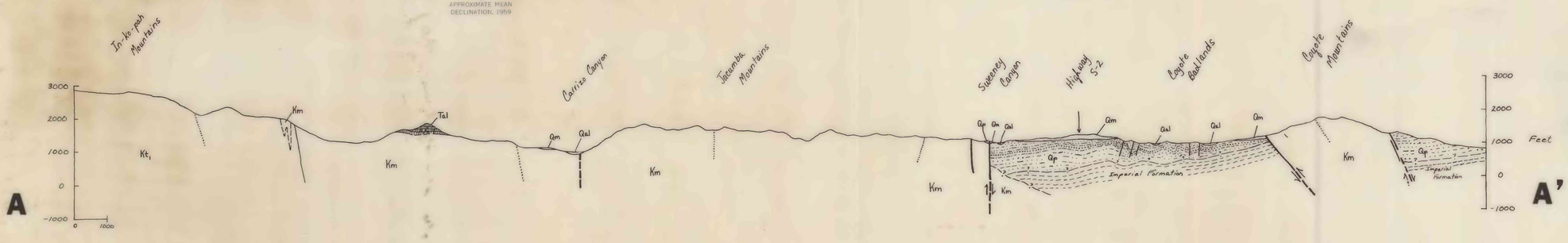
Fault, dashed where approximately located, queried where probable, dotted where concealed; U, upthrown side; D downthrown side; arrow shows direction of dip of fault plane, and amount of dip where it can be measured

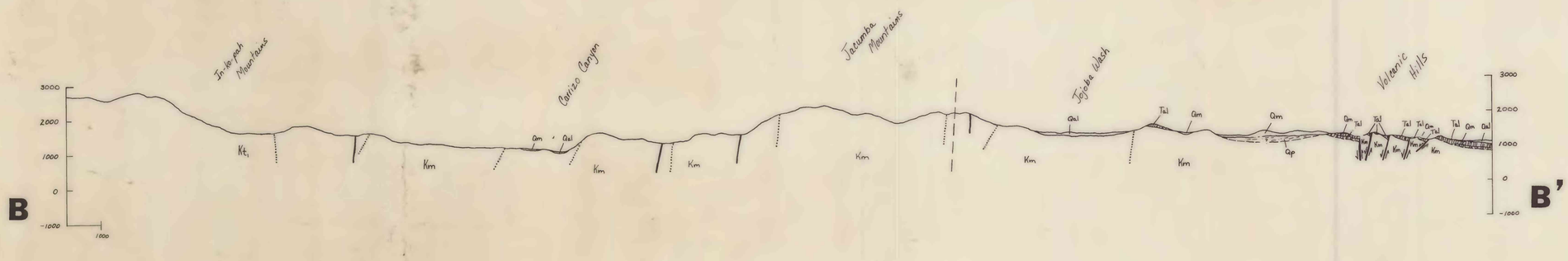
Strike and dip of inclined bedding in sedimentary rocks

Horizontal bedding in sedimentary rocks

Strike and dip of inclined foliation in crystalline rocks

Vertical dip of foliation in crystalline rocks





foliation
fault
contact

This report is preliminary and has not been edited or reviewed for conformity with Geological Survey standards and nomenclature.

GEOLOGIC MAP OF SWEENEY PASS QUADRANGLE
SAN DIEGO COUNTY, CALIFORNIA

BY WENDY C. HOGGATT 1979