DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

OPEN-FILE REPORT

78-113

BASE FROM
U. S. GEOLOGICAL SURVEY
1960

APPROXIMATE MEAN DECLINATION, 1960

SCALE 1:24,000

CONTOUR INTERVAL 40 FEET
DATUM IS MEAN SEA LEVEL

QUADRANGLE LOCATION

EXPLANATION

QUATERNARY

Qc — Colluvium and debris flows (sand, silt, and rock fragments)

Qal — Alluvium (sand and silt)

CRETACEOUS

Kmd — Quartz diorite (dikes in all units; too small to be shown at map scale)

Kem — Tonalite, quartz diorite and gabbro of East Mesa (biotite-hornblende tonalite, quartz diorite and minor gabbro)

Kcm — Quartz monzonite and granodiorite of Corte Madera (leucoadamellite, leucogranodiorite and minor leucogranite)

Kl — Pegmatite, alaskite and aplite (leucocratic dikes related to either Kpv or Kcm)

Kcp — Quartz monzonite and granodiorite of Chiquito Peak (hornblende-biotite quartz monzonite and lesser granodiorite; dashes indicate quartz monzonite or granodiorite with abundant mafic inclusions)

Kcr — Granodiorite and tonalite of Cuyamaca Reservoir (biotite granodiorite; hornblende-biotite granodiorite and tonalite)

Khc — Hybrid gneiss of Harper Creek (cordierite and sillimanite-bearing, quartz-biotite-plagioclase-potassium feldspar/muscovite gneiss)

Klb — Tonalite of Las Bancas (pyroxene-biotite tonalite and hornblende biotite tonalite; stipple pattern is leucocratic tonalite and granodiorite; ellipses indicate abundant calc-silicate inclusions)

Kc — Cuyamaca Gabbro (peridotite, olivine gabbro, hornblende gabbro, norite; block pattern is modified intrusion breccia consisting chiefly of gabbro blocks in a contaminated quartz monzonite matrix)

TRIASSIC (?)

TRm — Metasedimentary rocks (mica-quartz-feldspar semischist; micaceous feldspathic metaquartzite; calc-silicate rock; lesser mica-quartz schist, amphibolite and metaconglomerate; ellipses indicate abundant granitic gneiss)

Contact, long-dashed where approximate, short-dashed where indefinite or gradational, dotted where concealed

Fault, long-dashed where approximately located, short-dashed where inferred, queried where probable; U, upthrown side; D, downthrown side; arrows show relative horizontal displacement

75 — Strike and dip of metamorphic foliation, and relict bedding in metasedimentary rocks

Strike of vertical metamorphic foliation, and relict bedding in metasedimentary rocks

GEOLOGIC MAP OF THE VIEJAS MOUNTAIN QUADRANGLE, SAN DIEGO COUNTY, CALIFORNIA

by VICTORIA R. TODD 1978

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