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UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

STATE OF CALIFORNIA
EARL WARREN, GOVERNOR
C. H. PURCELL, DIRECTOR OF PUBLIC WORKS
EDWARD HYATT, STATE ENGINEER

PALA QUADRANGLE
CALIFORNIA-SAN DIEGO CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)

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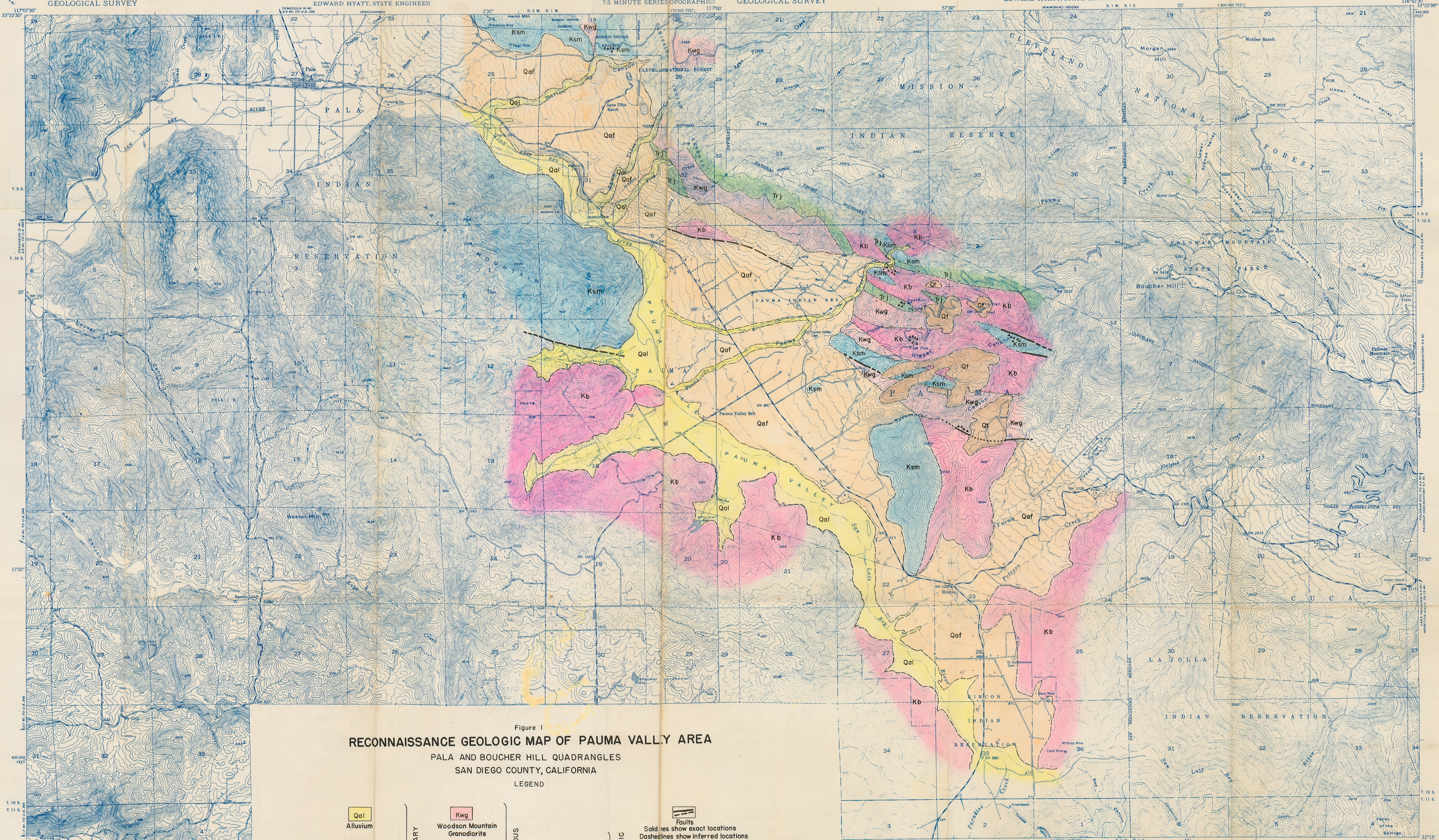
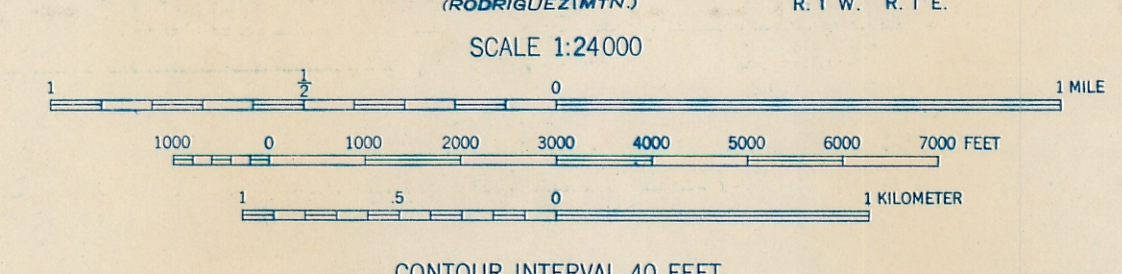


Figure 1
RECONNAISSANCE GEOLOGIC MAP OF PAUMA VALLEY AREA
PALA AND BOUCHER HILL QUADRANGLES
SAN DIEGO COUNTY, CALIFORNIA
LEGEND

- | | | | |
|--|--|--|---|
| <p>QUATERNARY</p> <ul style="list-style-type: none"> Qal
Alluvium Qaf
Alluvial Fan Deposits Qf
Terrace Deposits | <p>CRETACEOUS</p> <ul style="list-style-type: none"> Kwg
Woodson Mountain Granodiorite Kb
Bonsall Tonalite Ksm
San Marcos Gabbro | <p>TRIASSIC</p> <ul style="list-style-type: none"> Trj
Julian Schist | <p>Faults</p> <ul style="list-style-type: none"> Solid lines show exact locations Dashed lines show inferred locations <p>Zones of intense brecciation</p> <ul style="list-style-type: none"> |
|--|--|--|---|

Geology by T.B. Howes



THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, FEDERAL CENTER, DENVER, COLORADO OR WASHINGTON 25, D. C.
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

ROAD CLASSIFICATION
 HARD SURFACE ALL WEATHER ROADS GRAY WEATHER ROADS
 Heavy-duty Improved dirt
 Medium-duty Unimproved dirt
 Loose surface, graded, or narrow hard-surface
 U. S. Route State Route

BOUCHER HILL CALIF.
N3315-W11652.5/7.5
EDITION OF 1950

Mapped, edited, and published by the Geological Survey
Control by USGS, USC&GS, and U.S. Army
Topography from aerial photographs by multiple methods
Aerial photographs taken 1946. Field check 1949
Polyconic projection. 1927 North American datum
10,000-foot grid based on California coordinate system, zone 6
Dashed land lines indicate approximate location