DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

MISCELLANEOUS INVESTIGATIONS SERIES
MAP I–1728

CORRELATION OF MAP UNITS

Qa_1	Holocene	QUATERNARY	
Unconformity			
Qa_2			
Unconformity			
Tufa, Tuff A, Qtlm, Qtc, Tuff B, Tuff C	Pleistocene, Pliocene	QUATERNARY	
Unconformity			
Tcr		TERTIARY	
Unconformity			
Tv	Miocene	TERTIARY	
Unconformity			
TAu	Miocene, Cambrian, Proterozoic, and Archean	TERTIARY, PALEOZOIC, PROTEROZOIC, AND ARCHEAN	

TERTIARY — Tb — Stratigraphic relations uncertain

DESCRIPTION OF MAP UNITS

Qa_1 ALLUVIUM (HOLOCENE)

Qa_2 OLDER ALLUVIUM (QUATERNARY)—Age of unit is late Pleistocene

DEPOSITS OF LAKE TECOPA (QUATERNARY AND TERTIARY)—Divided into:

Tufa (Pleistocene)

Qtlm Lacustrine mudstone (Pleistocene and Pliocene)—Locally includes tuffs A, B, and C of Sheppard and Gude (1968) which are equivalent to the ash of the Lava Creek Tuff (0.60 Ma), the ash of the Bishop Tuff (0.73 Ma), and the ash of the Huckleberry Ridge Tuff (2.02 Ma), respectively

Qtc Conglomerate (Pleistocene and Pliocene)—Locally includes tuffs A and B of Sheppard and Gude (1968)

Tcr CHINA RANCH BEDS (TERTIARY)

Tb BASALT (TERTIARY)

Tv VOLCANIC ROCKS (MIOCENE)

TAu VOLCANIC ROCKS (MIOCENE), SEDIMENTARY ROCKS (CAMBRIAN AND PROTEROZOIC), AND GNEISS (ARCHEAN), UNDIVIDED

CONTACT

FAULT—Dashed where approximately located. U, upthrown side; D, downthrown side

FOSSIL LOCALITY—See table 2 for description

Base from U.S. Geological Survey 1:62,500
Eagle Mtn., Shoshone, Tecopa, 1951;
Stewart Valley, 1958

APPROXIMATE MEAN DECLINATION, 1987

SCALE 1:48 000

CONTOUR INTERVAL 40 FEET
AND 80 FEET IN NORTHEASTERN PART
DOTTED LINES REPRESENT HALF-INTERVAL CONTOURS
NATIONAL GEODETIC VERTICAL DATUM OF 1929

QUADRANGLE LOCATION

INTERIOR—GEOLOGICAL SURVEY, RESTON, VA — 1987 —GB5256

Geology mapped in 1981

LATE TERTIARY AND QUATERNARY GEOLOGY OF THE TECOPA BASIN, SOUTHEASTERN CALIFORNIA

By
John W. Hillhouse

1987

For sale by U.S. Geological Survey, Map Distribution, Box 25286, Federal Center, Denver, CO 80225

Explanatory pamphlet accompanies map