U.S. DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

MISCELLANEOUS INVESTIGATIONS SERIES
MAP I-2631 Sheet 2 of 5)
Pamphlet accompanies map

EXPLANATION

This correlation chart is unconventional in that it gives unit ages by geographic area and lithologic type; the stratigraphic relations among individual map units are summarized in the description of volcanic units and figure 6. This chart can be used as an index to the vertical and horizontal positions of units Qvs, QTvs, QTs, QTb, QTr, QTrb, QHs, and QHvg that cross geographic areas are shown only in their respective area; see figure 6 for unit correlations between areas. Volcanic units are grouped by geographic areas; within each area, they are further separated into mafic units (for example, type at to the left of each area) and silicic units (to the right). Ages, in millions of years before present, are shown in the last column. Vertical placement of map units reflects age as determined from field relations, from K-Ar dating (table 4), and from paleomagnetic correlations (table 5). Ages from Harland (1990) derived from magnetic data (table 4), as interpreted within the context of the polarity-chronologic sequence of Mankinen and Dalrymple (1979). Eras have been placed in geochronologic divisions (Quaternary, Quaternary and Tertiary, or Tertiary) as defined by the U.S. Geological Survey Committee on Stratigraphic Nomenclature. Unit designations (Q, QT, or T) follow these conventions. The Pliocene-Pleistocene boundary is placed at 1.8 Ma (Bishop and others, 1978, p. 150); other authors have placed the boundary at 1.67 Ma (Aguirre and Pasini, 1985) and at 1.6 Ma (see Hansen, 1991, p. 59). Pleistocene units are subdivided into four age groups that are further subdivided into five polarity-chronology age groups that are shown by color in the age-group columns and on sheets 2, 3, and 4; age-group divisions are based on magnetopolarity reversals. Color of box indicates rock type as shown on lithologic map.

Map unit—Box placed to center of time period during which unit was emplaced. Arrows point to correct column for unit in cases of overlap.

Map unit for which there is magnetopolarity information—*See* figure 6 for explanation of apparent discrepancies between magneto-polarity of unit and position in polarity-chronologic sequence

Negative magnetopolarity

Positive magnetopolarity

Transitional magnetopolarity

Map units having similar median age

Map units whose probable times of emplacement overlap—Placement of more than two units within box indicates probable overlap of adjacent samples

Mean age (whole-rock K-Ar) and limits of precision (at 2 standard deviations) of map unit—Shown for units for which stratigraphic and (or) magnetopolarity data preclude age assignment; gray where sample obtained from unit outside of map area; Mean at center of bar; asterisk place at favored time of emplacement

SURFICIAL DEPOSITS

SEDIMENTARY ROCKS
Unconformity
Oligocene — To
Unconformity
CRETACEOUS — Upper Cretaceous — Ku
Unconformity
TRIASSIC — Upper Triassic — TRu
Unconformity
Middle and Lower Triassic — TRm
Unconformity
PERMIAN — Lower Permian — Pk

AGE GROUP (sheet 5)

BASALTIC FLOWS AND PYROCLASTIC DEPOSITS

ANTELOPE MOUNTAIN AREA · BLUE RIDGE MOUNTAIN AREA · CERRO HUECO AREA · DEAD HORSE DRAW AREA · ECKS MOUNTAIN AREA · GREENS PEAK AREA · HAYSTACK MOUNTAIN AREA

BASALTIC FLOWS AND PYROCLASTIC DEPOSITS — Concluded

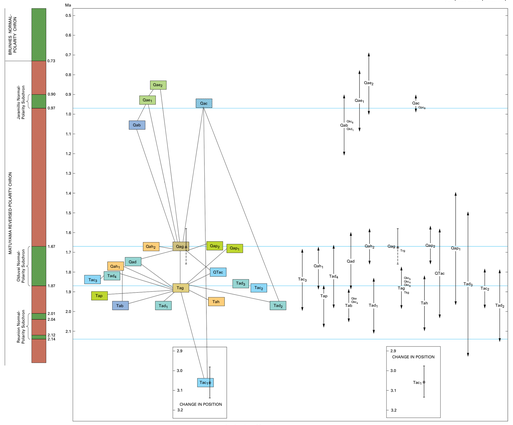
IRIS SPRING AREA · JUAN GARCIA AREA · KNOLLS AREA · LAKE MOUNTAIN AREA · MORGAN MOUNTAIN AREA · North Fork White River Area · Ormega Sink Area · Pole Knoll Area · Richville Area · Show Low Creek Area · Udall Range Area · Vernon Area · White Lakes Basin Area

REVERSED NORMAL POLARITY CHRON

Jaramillo Normal Polarity Subchron

MATUYAMA REVERSED-POLARITY CHRON

Olduvai Normal-Polarity Subchron

Reunion Reversed-Polarity Subchron

BRUNHES NORMAL POLARITY CHRON