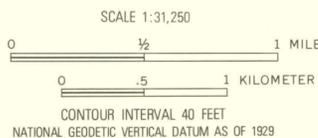
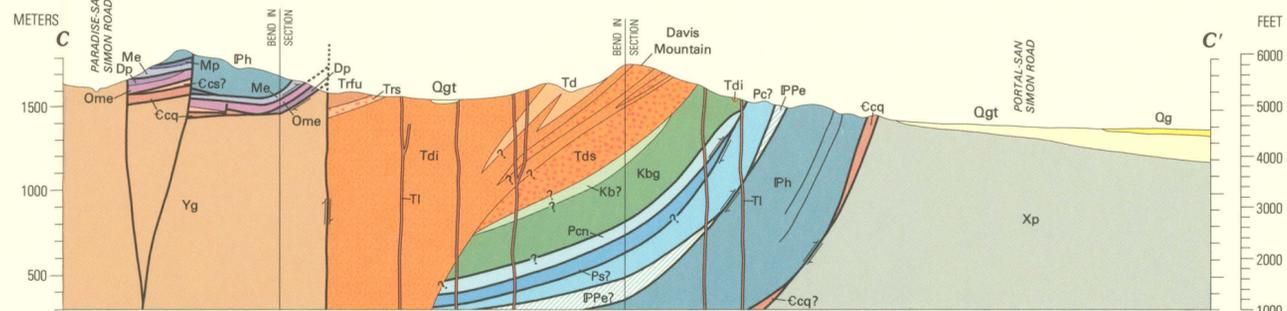
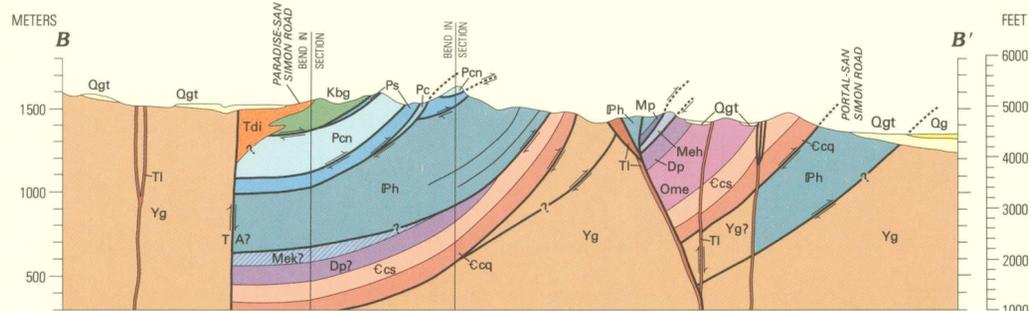
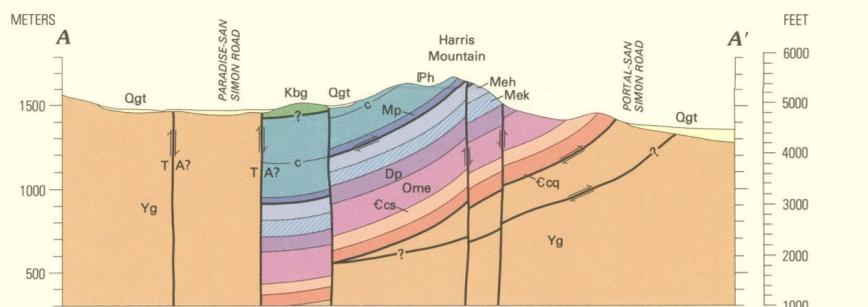


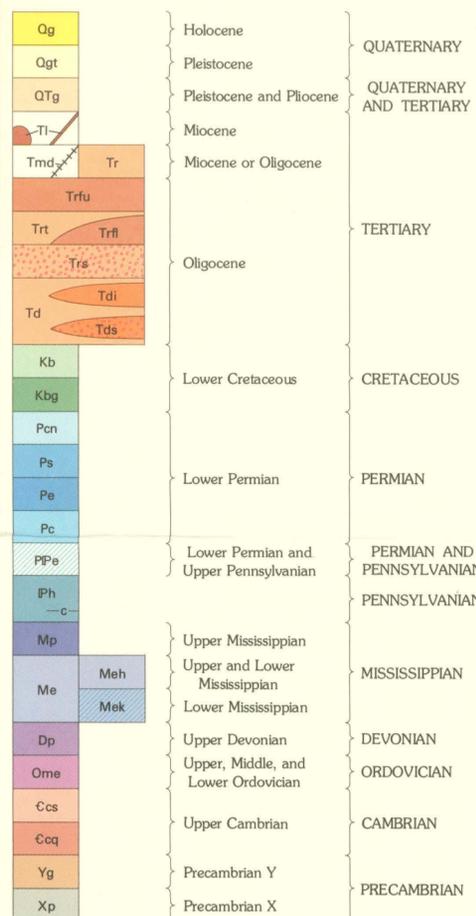
Base from U.S. Geological Survey,  
1:62,500 Portal, 1958



Geology by Harald Drewes,  
1974; and Harald Drewes  
and C. H. Thorman, 1975



CORRELATION OF MAP UNITS



- Td** DACITE OF DAVIS MOUNTAIN (OLIGOCENE)—Mainly greenish-gray flow breccia of dacite or andesite(?)
- Tdi** Intrusive breccia—Fission track age on zircon 28.6±1.2 m.y. (C. W. Naeser, written commun., 1977)
- Tds** Tuffaceous sandstone and conglomerate, and tuff breccia
- BISBEE FORMATION (LOWER CRETACEOUS):**
- Kb** Upper unit—Shale, siltstone, and sandstone
- Kbg** Glance Conglomerate Member
- NACO GROUP:**
- Pcn** Concha Limestone (Lower Permian)—Medium-gray cherty fossiliferous limestone
- Ps** Scherrer Formation (Lower Permian)—Light-brownish-gray fine-grained quartzite, a basal reddish-brown siltstone, and thin medial light-gray limestone or dolomite
- Pe** Epitaph Dolomite (Lower Permian)—Light-gray and dark-gray dolomite
- Pc** Colina Limestone (Lower Permian)—Medium-gray sparsely cherty fossiliferous limestone
- PPe** Earp Formation (Lower Permian and Upper Pennsylvanian)—Pale-yellowish-brown siltstone, marlstone, and thin intercalated beds of light-gray limestone
- IPh** Horquilla Limestone (Upper and Middle Pennsylvanian)—Light-medium-gray thin-bedded fine-grained cherty fossiliferous limestone, and intercalated units of siltstone in upper half of formation
- c** Line, c—Marker bed containing *Chaetetes milliporaceus* corals
- Mp** PARADISE FORMATION (UPPER MISSISSIPPIAN)—Brownish-gray shale, sandstone, and thin-bedded arenaceous limestone
- Me** ESCABROSA LIMESTONE (UPPER AND LOWER MISSISSIPPIAN):
- Meh** Upper member—Light-gray and medium-gray coarse-grained thick-bedded crinoidal limestone. May be equivalent to the Hachita Formation of Armstrong (1962)
- Mek** Lower member—Light-medium-gray medium-bedded crinoidal limestone. May be equivalent to the Keating Formation of Armstrong (1962)
- Dp** PORTAL FORMATION OF SABINS, 1957 (UPPER DEVONIAN)—Dark-gray to olive-gray shale and thin-bedded limestone
- Ome** MONTOYA GROUP (UPPER AND MIDDLE ORDOVICIAN) AND EL PASO FORMATION (LOWER ORDOVICIAN)—Mostly light-gray limestone and dolomite, and an upper unit of brown dolomite similar to unit in the next range to the east that contains Upper Ordovician conodonts
- CORONADO SANDSTONE (UPPER CAMBRIAN):**
- Ccs** Sandstone and siltstone—Brownish-gray arkosic sandstone, siltstone, and some calcareous sandstone near top of unit
- Ccq** Quartzite and sandstone—Thick-bedded brownish-gray to light-gray quartzite, quartzitic and arkosic sandstone, and conglomerate lenses near base. Unit is lithologic correlative of Bolsa Quartzite to west, but is thinner and is believed to be younger (Hayes, 1975)
- Yg** GRANODIORITE (PRECAMBRIAN Y)—Coarse-grained porphyritic granodiorite, contains some small pods of aplite
- Xp** PINAL SCHIST (PRECAMBRIAN X)—Phyllite, schist, and gneiss
- SILICIFIED ROCK**
- OTHER ALTERED ROCK**—Includes propylitized, pyritized, and argillized rock

DESCRIPTION OF MAP UNITS

- Qg** GRAVEL (HOLOCENE)—Alluvium along watercourses and on fans
- Qgt** GRAVEL AND SAND (PLEISTOCENE)—Alluvium on terraces and on fan aprons
- QTg** GRAVEL (PLEISTOCENE AND PIOCENE)—Alluvium of high terraces
- TI** LATITE, QUARTZ LATITE, AND RHYOLITE (MIOCENE)—Dike, commonly porphyritic. Probably genetically related to extensive nearby volcanic field
- Tmd** DIORITE (MIOCENE OR OLIGOCENE)—Dike, commonly microdiorite
- Tr** RHYOLITE TUFF (MIOCENE OR OLIGOCENE)
- ANDESITE OF ROUND VALLEY (OLIGOCENE):**
- Trfu** Andesite porphyry flow—Upper unit
- Trt** Tuff and tuff breccia
- Trfl** Andesite porphyry flow—Lower unit
- Trs** Tuffaceous sandstone and conglomerate

- CONTACT**—Dotted where concealed
- MARKER BED**—Undesignated marker unit or horizon
- FAULT**—Showing dip, inclined and vertical. Dotted where concealed:
  - Normal fault—Bar and ball on downthrown side
  - Strike-slip Tear fault—Arrow couple shows relative movement
  - Thrust fault—Sawtooth on upper plate
- FAULT ON CROSS SECTION**—Arrow couple shows relative movement. A, movement away from viewer; T, toward viewer. Queried where basis for projection is lacking
- STRIKE AND DIP OF BEDS:**
  - 35° Inclined
  - Vertical
- STRIKE AND DIP OF FOLIATION:**
  - 60° Inclined
  - Vertical
- \*28.6** SAMPLE SITE—Showing age of rock in m.y.
- x** PROSPECT—Commonly showing copper oxide minerals

GEOLOGIC MAP AND STRUCTURE SECTIONS OF PART OF THE CENTRAL CHIRICAHUA MOUNTAINS NEAR PORTAL, ARIZONA