CONTACT SYMBOLS

- Depositional or intrusive contact
- Thrust fault (older over younger), solid teeth on upper plate
- "Plated" fault (metamorphic fabric), open teeth on upper plate [thrust(?) or denudational structure]
- Detachment fault (younger over older), double hachures on upper plate [chloritic breccia and/or mylonitic fabric]
- Low-angle normal (LAN) fault (<45° dip), single hachures on hanging wall
- High-angle normal (HAN) fault (>45° dip), ball and bar on downthrown block
- Steep fault, nature uncertain (no ornament)

DIP SYMBOLS

- Inclined stratification
- Inclined foliation
- Overturned bedding
- Vertical bedding
- Horizontal bedding
- Attitude of fault

FOLD SYMBOL

- Syncline
- Anticline

INTRUSIVE ROCK UNITS

Tertiary

- Tir, rhyolitic plugs and dikes
- Tgt, Tortolita granitic pluton
- Tgf, Fortified Peak pluton
- Tgc, Catalina granitic pluton

Mid-Tertiary (Oligocene-Miocene) Suite

- Tw / Twm — Eocene Wilderness granite suite (two-mica granite); Twm, mylonitic

Upper Cretaceous/Paleocene (?)

- Kgc, Copper Creek granodiorite stock
- Kdi, semitabular dioritic bodies
- Krp, Rice Peak granodiorite porphyry
- Kgp, granitic porphyry dikes and sills
- Kgh, Chirreon Wash granodiorite
- Kgl, Leatherwood quartz diorite
- Kgr, Rattler granodiorite stock
- Kgt, Tortilla quartz diorite
- Kga, Amole granitic pluton

Precambrian

- Yo / Yom — Oracle/Ruin granite suite (Middle Proterozoic); Yom, mylonitic
- Yg / Yd — Yg, granodiorite and Yd, diorite
- Xj / Xjm — Johnny Lyon granodiorite suite (Lower Proterozoic); Xjm, mylonitic

STRATIFIED ROCK UNITS

post-mid-Miocene

- Qal — stream valley alluvium (shown along San Pedro and Gila Rivers only)
- Nbf — dissected Neogene basin fill (Quiburis Formation and correlatives), together with overlying terrace and pediment gravel sheets and local alluvium

mid-Oligocene to mid-Miocene volcanic and sedimentary sequences

- Tsm / Tsmt / Tsmk / Tsz / Tsk / Tsp — San Manuel Formation (Lower Miocene) of San Pedro Trough
  - Tsm, undifferentiated
  - Tsmk, Kannally Member
  - Tsmt, Tucson Wash Member
  - Tsz, Soza Canyon facies (volcanic clasts)
  - Tsk, Kelsey Canyon facies (granitic clasts)
  - Tsp, Paige Canyon facies (metamorphic clasts)
- Tpa — Pantano Formation (Oligocene-Miocene) of Cienega Gap and Tucson Basin
- Tcs / Tcv / Tch — Cloudburst Formation (Upper Oligocene to Lower Miocene) of San Pedro Trough
  - Tcs, sedimentary upper member
  - Tch, Hackberry Wash facies
  - Tcv, volcanic lower member
- Ttv — Tertiary volcanics (Oligocene) of Tucson Mountains
- Tgv / Tgw — Galiuro Volcanics (Upper Oligocene); Tgw, basal "Whitetail Conglomerate" (shown locally only)
- Tmi — Mineta Formation (Oligocene) of Cañada Atravesada and Teran Basin

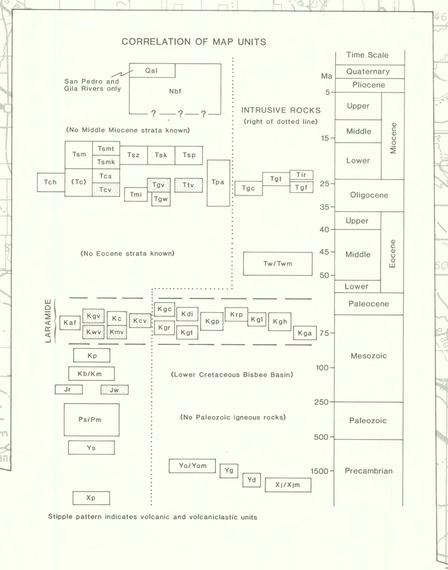
"Laramide" Interval

- Kcv / Kaf / Kcs / Kgv / Kmv / Kwv — Upper Cretaceous to Paleocene(?) volcanic and sedimentary units
  - Kcv, Cat Mountain Rhyolite
  - Kaf, American Flag Formation
  - Kcs, Cascabel Formation
  - Kmv, Muleshoe Volcanics
  - Kgv, Glory Hole Volcanics
  - Kwv, Williamson Canyon Volcanics

Precambrian-Paleozoic-Mesozoic

- Kp — Pinkard Formation (basal Upper Cretaceous)
- Kb / Km — Bisbee Group (Lower Cretaceous); Km, metamorphosed
- Jr / Jw — mid-Jurassic(?) redbed units; Jr, Recreation Redbeds; Jw, Walnut Gap Volcanics
- Ps / Pm — Paleozoic (Cambrian to Permian) strata; Pm, metamorphosed
- Ys — Proterozoic Apache Group and Troy Quartzite (including intrusive diabase sills and dikes)
- Xp — Proterozoic Pinal Schist, dominantly metasedimentary

CORRELATION OF MAP UNITS



GEOLOGIC MAP OF CATALINA CORE COMPLEX AND SAN PEDRO TROUGH

Pima, Pinal, Gila, Graham and Cochise Counties, Arizona

by

William R. Dickinson

ARIZONA GEOLOGICAL SURVEY
Contributed Map CM-92-C
1992

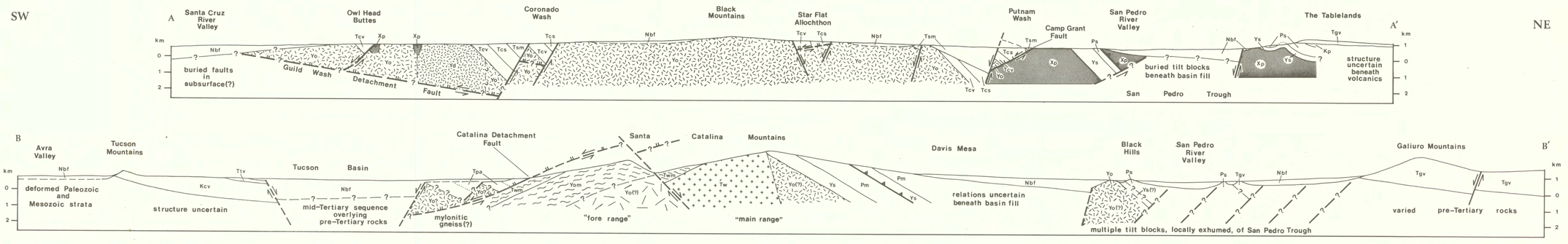
(originally published as part of Geological Society of America Special Paper 264)

Scale 1:125,000

5 0 5 10 MILES

5 0 5 10 15 KILOMETERS

CONTOUR INTERVAL 200 FEET
WITH SUPPLEMENTARY CONTOURS AT 100 FOOT INTERVALS



This map was originally published in 1991 as part of Geological Society of America Special Paper 264. It is based on more than 80 geologic maps, both published and unpublished, that were prepared by more than 60 workers, as well as on reconnaissance, remapping, and reinterpretation by the author. References to these previous maps are listed in the following publication: Dickinson, W.R., 1987, General geologic map of Catalina core complex and San Pedro trough, Arizona: Arizona Bureau of Geology and Mineral Technology [currently the Arizona Geological Survey] Miscellaneous Map MM-87-A, 18 p., scale 1:62,500, 15 sheets.

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