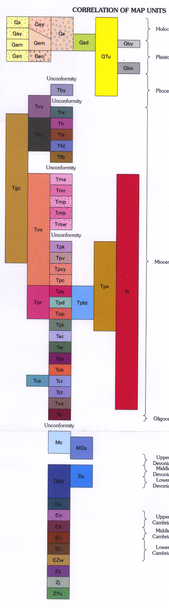
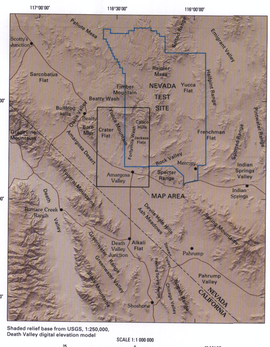
CORRELATION OF MAP UNITS



LIST OF MAP UNITS

- Qa — **Alluvium (Holocene)**
- Qay — **Younger alluvium (Holocene and late Pleistocene)**
- Qam — **Alluvium (late and middle Pleistocene)**
- Qao — **Older alluvium (middle and early Pleistocene)**
- Qay — **Eolian sand and fragments (Holocene and late Pleistocene)**
- Qam — **Eolian-colluvial ramp deposits (Holocene to middle Pleistocene)**
- Qao — **Older eolian sand (middle to early Pleistocene)**
- Qe — **Eolian deposits (Holocene to middle Pleistocene)**
- Qsd — **Spring deposits (Holocene to middle Pleistocene)**
- QTu — **Surficial deposits, undivided (Quaternary and Pliocene)**—Shown on cross sections only
- Qdy — **Younger Quaternary basalt (late Pleistocene)**
- Qdo — **Older Quaternary basalt (early Pleistocene)**
- Tbs — **Younger Tertiary basalt of Crater Flat (Pliocene)**
- Tvy — **Younger volcanic rocks (Pliocene to Miocene)**
- Tvs — **Rock-avalanche breccia of southern Crater Flat (Miocene)**
- Tgc — **Conglomerates, fanglomerates, and rock-avalanche breccia (Miocene)**
- Tbu — **Older Tertiary basalts (Miocene)**—Includes older Tertiary basalts of Crater Flat, basalt of Skull Mountain, and basalt of Kiwi Mesa
- Tbr — **Rocket Wash Tuff of Thirsty Canyon Group (Miocene)**
- Tbp — **Rhyolite of Shoshone Mountain**
- Tbd — **Lavas of Dome Mountain**
- Tbs — **Beatty Wash Formation**—Includes rhyolite of Max Mountain and rhyolite of Chalfant Canyon
- **Timber Mountain Group (Miocene)**
- Tmn — **Ammonia Tanks Tuff**
- Tmz — **Rainier Mesa Tuff**—Includes rhyolite of Fluorspar Canyon
- Tmp — **Rhyolite of Pinnacles Ridge**
- Tmb — **Rhyolite of Winterspike Butte**
- Tmw — **Rhyolite of Windy Wash**
- **Paintbrush Group (Miocene)**
- Tvw — **Intracaldera and caldera margin megabreccia and mesobreccia**
- Tpk — **Rhyolite of Comb Peak**
- Tpy — **Rhyolite of Vent Pass**
- Tpcy — **Tuff of Pintwater Pass**
- Tpc — **Tiva Canyon Tuff**
- Tpt — **Rhyolite lavas, undivided**—Includes rhyolite of Black Glass Canyon, rhyolite of Echo Peak, rhyolite of Zigzag Hill, rhyolite lava above Yucca Mountain Tuff, rhyolite lava above Pah Canyon Tuff, and rhyolite lava beneath Pah Canyon Tuff
- Tpy — **Yucca Mountain Tuff**
- Tpd — **Rhyolite of Delirium Canyon**
- Tpp — **Pah Canyon Tuff**
- Tpbt — **Bedded tuff**
- Tpt — **Topopah Spring Tuff**
- Tpn — **Painthrush Group tuffs, undivided (Miocene)**
- Tac — **Calico Hills Formation (Miocene)**
- Tac — **Wahmonie Formation (Miocene)**
- **Crater Flat Group (Miocene)**
- Tcp — **Prow Pass Tuff**
- Tcb — **Bullfrog Tuff**
- Tcn — **Pre-Bullfrog Tuff bedded tuff**
- Tcr — **Rhyolite of Prospector Pass**
- Tct — **Tram Tuff**
- Tvu — **Older volcanic rocks, undivided (Miocene)**—Includes dacite lavas, Lithic Ridge Tuff, pre-Lithic Ridge tuffs and lavas, older tuffs of USW-G1, and tuff of Yucca Flat
- Ti — **Intrusions (Miocene)**
- Ts — **Older sedimentary rocks, undivided (Miocene and Oligocene)**—Includes rocks of Pavits Spring and rocks of lower Rock Valley
- Mc — **Chainman Shale (Mississippian)**
- MDc — **Clastic sedimentary rocks (Mississippian and Upper Devonian)**
- Dc — **Dolomite, limestone, and sandy dolomite (Middle and Lower Devonian)**
- DSd — **Dolomite (Middle and Lower Devonian and Silurian)**
- Ou — **Sedimentary rocks, undivided (Ordovician)**—On cross sections, unit includes Upper Ordovician Ely Springs Dolomite, Upper and Middle Ordovician Eureka Quartzite, and Middle and Lower Ordovician Pogonip Group (Antelope Valley Formation, Nevadan Formation, and Goodwin Limestone). On geologic map, unit consists entirely of Pogonip Group
- Єn — **Nopah Formation (Upper Cambrian)**
- Єb — **Bonanza King Formation (Upper and Middle Cambrian)**
- Єc — **Carrara Formation (Middle and Lower Cambrian)**
- Єz — **Zabriskie Quartzite (Lower Cambrian)**
- Єcw — **Wood Canyon Formation (Lower Cambrian and Late Proterozoic)**
- Єs — **Stirling Quartzite (Late Proterozoic)**
- Єj — **Johnnie Formation (Late Proterozoic)**—Shown on cross section *B–B'* only
- Єvu — **Metasedimentary rocks, undivided (Late and Middle Proterozoic)**—Shown on cross section *B–B'* only

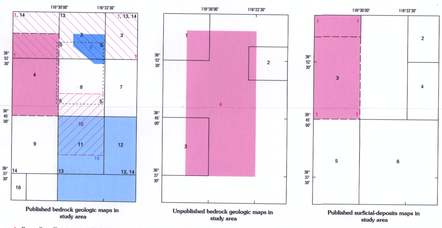
- **Bedrock contact**—Solid where exposed; dashed where approximately located; dotted where concealed beneath Quaternary cover
- **Contact between Quaternary surficial deposits**
- **Fault scarp in surficial deposits**—Hachures on downthrown side
- **Fault**—Solid where exposed or tightly constrained; dashed where approximately located; dotted where concealed beneath Quaternary cover. Ball and bar on downthrown side. Opposed arrows indicate relative movement where known. In cross sections, A, movement away from viewer; T, movement toward viewer
- **Fault located from geophysical methods**—Ball and bar on downthrown side. Opposed arrows indicate relative movement where known
- **Low-angle normal fault**—Boxes on upper plate
- **Thrust or reverse fault**—Solid where exposed or tightly constrained; dotted where concealed beneath Quaternary cover; queried where inferred or uncertain. Teeth on upper plate
- **Structural boundary of Claim Canyon Caldera**
- **Syncline axis**—Showing direction of plunge
- **Borehole location and number**—See table 1
- **Strike and dip of bedding**
  - **Inclined**—Measured in field
  - **Inclined**—Based on three-point calculation on depositional contact
  - **Overturned**—Measured in field
  - **Vertical**—Measured in field
  - **Horizontal**—Measured in field
- **Strike and dip of compaction foliation in welded tuff**
- **Road**
- **Nevada Test Site boundary**



Shaded relief base from USGS, 1:250,000, Death Valley digital elevation model

SCALE 1:1 000 000

INDEX MAP SHOWING BOUNDARIES OF THE GEOLOGIC MAP AREA AND OF THE NEVADA TEST SITE, AND LOCATIONS OF SELECTED GEOGRAPHIC FEATURES, ROADS, AND TOWNS



Published bedrock geologic maps in study area

1. Byers, Carr, Christiansen, and others (1976)
2. Christiansen and Lipman (1965)
3. Orkild and O'Connor (1970)
4. Fiedels and others (1994)
5. Day, Dickerson, and others (1998)
6. Ross, Morrison and Drake (1998a)
7. McKay and Williams (1964)
8. Lipman and McKay (1965)
9. Swadley and Carr (1987)
10. Scott (1996)
11. McKay and Sargent (1970)
12. Sargent and others (1970)
13. Maldonado (1985)
14. Frizzell and Shulters (1990)
15. Burchfiel (1964)
16. Wright and Troxel (1993)

Unpublished bedrock geologic maps in study area

1. C.J. Fridrich and others, East of Beatty Mountain quadrangle
2. F.W. Simonds, Calico Hills, M.S. thesis, 1989
3. C.J. Fridrich and others, Big Dune quadrangle, 1995

Unpublished surficial-deposits maps in study area

3. C.J. Fridrich and others, Big Dune quadrangle, 1995
4. S.C. Lundstrom, 1998

Published surficial-deposits maps in study area

1. Swadley and Parrish (1988)
2. Swadley and Hoover (1989a)
3. Fiedels and others (1994)
4. Swadley and Hoover (1989b)
5. Swadley and Carr (1987)
6. Swadley (1983)

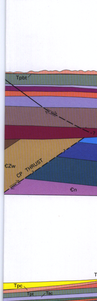
INDEX TO GEOLOGIC MAPPING OF STUDY AREA

[Digital maps of Wahl and others (1997) and Slate and others (2000) include entire study area]

GEOLOGIC MAP OF THE YUCCA MOUNTAIN REGION, NYE COUNTY, NEVADA

By
Christopher J. Potter[1], Robert P. Dickerson[2], Donald S. Sweetkind[1], Ronald M. Drake II[1], Emily M. Taylor[1], Christopher J. Fridrich[1], Carma A. San Juan[1], and Warren C. Day[1]
2002

[1]U.S. Geological Survey
[2]S.M. Stoller Corp.



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