Geologic Map of Death Valley National Park

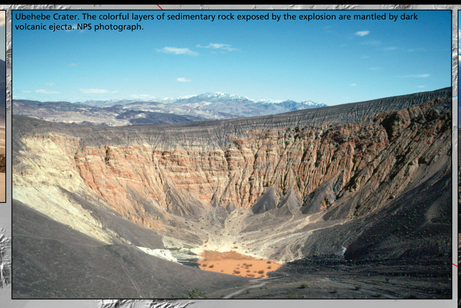
California and Nevada

National Park Service
U.S. Department of the Interior

Geologic Resources Inventory
Natural Resource Stewardship and Science



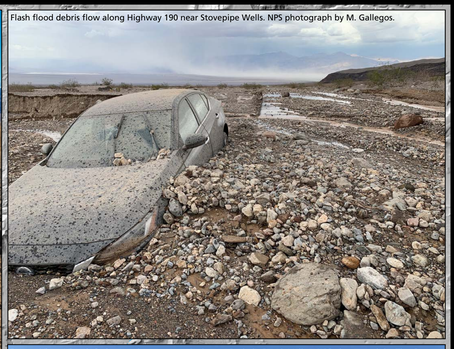
The shifting sands of Eureka Dunes. The Last Chance Range rises in the background. NPS photograph by Kurt Moses.



Ubehebe Crater. The colorful layers of sedimentary rock exposed by the explosion are mantled by dark volcanic ejecta. NPS photograph.



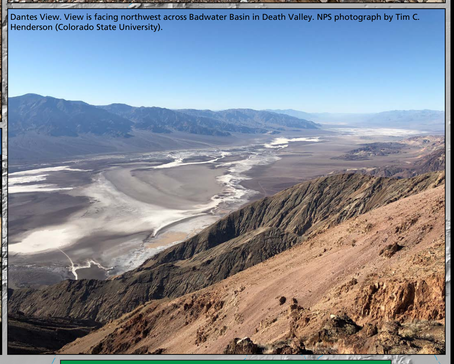
Mars Hill. The hill consists of loose basaltic boulders, cobbles, and pebbles akin to the Martian surface. NPS photograph by Kurt Moses.



Flash flood debris flow along Highway 190 near Stovepipe Wells. NPS photograph by M. Gallegos.



NPS ranger posing on the film set of "Star Wars: A New Hope". NPS photograph.



Dantes View. View is facing northwest across Badwater Basin in Death Valley. NPS photograph by Tim C. Henderson (Colorado State University).



The Racetrack. An isolated rock slowly migrates along a desiccated playa. NPS photograph by Kurt Moses.

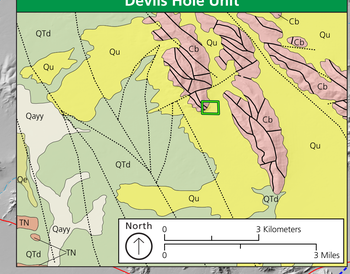


Undercut roadway in the park caused by storm damage. The storm washed away portions of the road and left behind unconsolidated debris. NPS photograph.



Harmony Borax Works at night. The borax mining site is listed on the National Register of Historic Places. NPS photograph by Kessler.

Devils Hole Unit



LEGEND

- NPS Boundary
- Highway
- Water

Geologic Contacts

solid where known or certain, long-dashed where approximate, dashed where inferred

- contact
- map boundary

Faults

solid where known or certain, short-dashed where inferred, short-dashed where concealed, long-dashed where approximate, teeth point towards the overriding block

- thrust fault
- low-angle normal fault
- unknown offset/displacement

Geologic Units

- Qayy — Youngest alluvium along active channels (Holocene)
- Qu — Alluvium, undivided
  For visual clarity at the map scale, certain units from the GRI GIS data were grouped. Alluvium, undivided (Qu) includes young alluvium (Qay), young fine-grained alluvium (Qayf), intermediate-age alluvium (Qayo), undifferentiated younger alluvium (Qau), old alluvium (Qao), undifferentiated alluvium (QTau), and oldest alluvium (QTa).
- QTls — Landslide block (late Tertiary to Holocene)
- Qp — Playa and (or) salt pan deposits (Holocene)
- Qe — Eolian deposits (middle Pleistocene to Holocene)
- QTd — Deposits associated with modern or past ground-water discharge (late Tertiary to Holocene)
- Ql — Old lacustrine deposits (middle to late Pleistocene)
- QTp — Old paludal or lacustrine deposits (late Tertiary to Pleistocene)
- QTs — Post-basin-range sedimentary basin-fill deposits (Pliocene to Pleistocene)
- QTsx — Post-basin-range rock-avalanche breccia deposits (Pliocene to Pleistocene)
- QTB — Basin-fill deposits of the Badwater assemblage
  Basin-fill deposits of the Badwater assemblage (QTB) includes mafic volcanic deposits (QTvmB) and sedimentary basin-fill deposits (QTsB).
- TFC — Basin-fill deposits of the Furnace Creek assemblage
  Basin-fill deposits of the Furnace Creek assemblage (TFC) includes silicic volcanic deposits (TvsF), mafic volcanic deposits (TvmF), silicic intrusive deposits (TisF), mafic intrusive deposits (TimF), tectonic melange (TfxF), sedimentary basin-fill deposits (TsF), sedimentary and volcanic basin-fill deposits (TsvF), and rock-avalanche breccia deposits (TsxF).
- TN — Basin-fill deposits of the Navadu assemblage
  Basin-fill deposits of the Navadu assemblage (TN) includes silicic volcanic deposits (TvsN), younger silicic volcanic deposits (TvsNy), older silicic volcanic deposits (TvsNo), mafic volcanic deposits (TvmN), younger mafic volcanic deposits (TvmNy), older mafic volcanic deposits (TvmNo), silicic intrusive deposits (TisN), mafic intrusive deposits (TimN), tectonic melange (TfxN), sedimentary basin-fill deposits (TsN), sedimentary and volcanic basin-fill deposits (TsvN), and rock-avalanche breccia deposits (TsxN).
- TO — Basin-fill deposits of the Owlshead assemblage
  Basin-fill deposits of the Owlshead assemblage (TO) includes silicic volcanic deposits (TvsO), mafic volcanic deposits (TvmO), silicic intrusive deposits (TisO), mafic intrusive deposits (TimO), and sedimentary basin-fill deposits (TsO).
- THG — Basin-fill deposits of the Hells Gate assemblage
  Basin-fill deposits of the Hells Gate assemblage (THG) includes silicic volcanic deposits (TvsH), mafic volcanic deposits (TvmH), sedimentary basin-fill deposits (TsH), and sedimentary and volcanic basin-fill deposits (TsvH).
- TTC — Basin-fill deposits of the Titus Canyon assemblage
  Basin-fill deposits of the Titus Canyon assemblage (TTC) includes tectonic melange (TfxT), sedimentary basin-fill deposits (TsT), and rock-avalanche breccia deposits (TsxT).
- Kis — Younger Mesozoic silicic intrusive rocks (Cretaceous)
- Jis — Older Mesozoic silicic intrusive rocks (Jurassic)
- JTRis — Oldest Mesozoic silicic intrusive rocks (Triassic to Jurassic)
- JTRsv — Sedimentary and volcanic rocks, undivided (Jurassic and Triassic)
- PZu — Paleozoic sedimentary rocks, undivided (Paleozoic)
- PSu — Permian and Silurian sedimentary rocks, undivided (Silurian to Permian)
- Pov — Owens Valley Group (Lower Permian)
- PPNb — Bird Spring Formation (Lower Permian and Pennsylvanian)
- PPNkc — Keeler Canyon Formation (Middle Pennsylvanian to Lower Permian)
- PNt — Tihvipah Limestone (Lower to Middle Pennsylvanian)
- Mu — Mississippian sedimentary rocks, undivided (Upper and Lower Mississippian)
- Dlb — Lost Burro Formation (Upper and Middle Devonian)
- DShv — Hidden Valley Dolomite (Lower Devonian and Silurian)
- OCu — Ordovician and Cambrian sedimentary rocks, undivided (Ordovician and Upper Cambrian)
- Oes — Ely Springs Dolomite (Upper Ordovician)
- Oe — Eureka Quartzite (Upper and Middle Ordovician)
- OCp — Pogonip Group (Middle and Lower Ordovician and Upper Cambrian)
- Cnbc — Nopah, Bonanza King, and Carrara Formations, undivided (Upper, Middle, and Lower Cambrian)
- Cn — Nopah Formation (Upper Cambrian)
- Cb — Bonanza King Formation (Upper and Middle Cambrian)
- Cm — Monola Formation (Middle Cambrian)
- Cc — Carrara Formation (Middle and Lower Cambrian)
- Cms — Mule Spring Limestone (Lower Cambrian)
- Csv — Saline Valley Formation (Lower Cambrian)
- Cz — Zabriskie Quartzite (Lower Cambrian)
- Ch — Harkless Formation (Lower Cambrian)
- CZws — Wood Canyon Formation and Stirling Quartzite, undivided (Lower Cambrian and Neoproterozoic)
- CZw — Wood Canyon Formation (Lower Cambrian and Neoproterozoic)
- Cpo — Poleta Formation (Lower Cambrian)
- CZca — Campito Formation, undivided (Lower Cambrian and Neoproterozoic)
- Ccam — Campito Formation, Montenegro Member (Lower Cambrian)
- CZcaa — Campito Formation, Andrews Mountain Member (Lower Cambrian and Neoproterozoic)
- Zd — Deep Spring Formation (Neoproterozoic)
- Zs — Stirling Quartzite (Neoproterozoic)
- Zr — Reed Dolomite (Neoproterozoic)
- Zw — Wyman Formation (Neoproterozoic)
- Zj — Johnnie Formation (Neoproterozoic)
- ZYp — Noonday Dolomite and Pahrump Group, undivided (Mesoproterozoic to Neoproterozoic)
- Zn — Noonday Dolomite (Neoproterozoic)
- Zk — Kingston Peak Formation (Neoproterozoic)
- Zb — Beck Spring Dolomite (Neoproterozoic)
- Yh — Horse Thief Spring Formation (Neoproterozoic)
- Yc — Crystal Spring Formation (Mesoproterozoic)
- Xmi — Metamorphic and igneous rocks, undifferentiated (Paleoproterozoic)

Location Map



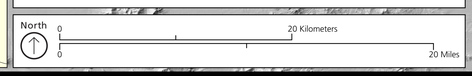
This map displays geologic map data compiled by the National Park Service Geologic Resources Inventory. It is not a substitute for site-specific investigations. All GRI products are available at https://go.nps.gov/gripubs.

Source Map:
Workman, J. B., C. M. Menges, C. J. Fridrich, and R. A. Thompson. 2014. Geologic map of Death Valley National Park, California and Nevada (scale 1:150,000). Scientific Investigations Map SIM-XXXX, unpublished digital data. US Geological Survey, Reston, Virginia.

Source Scale: 1:150,000. According to US National Map Accuracy Standards, features are within 76.2 m (250 ft) of their true location.

Poster Layout: Trista L. Thornberry-Ehrlich (Colorado State University)

Poster Date: January 2025



DEATH VALLEY NATIONAL PARK

Eureka Dunes
Scotty's Castle Visitor Center
Ubehebe Crater
The Racetrack
Stovepipe Wells
Harmony Borax Works
Furnace Creek Visitor Center
Mars Hill
Badwater Road
Dantes View
NEVADA
CALIFORNIA