

Geologic Map of Aniakchak National Monument and Preserve

Alaska

National Park Service
U.S. Department of the Interior



Geologic Resources Inventory
Natural Resource Stewardship and Science

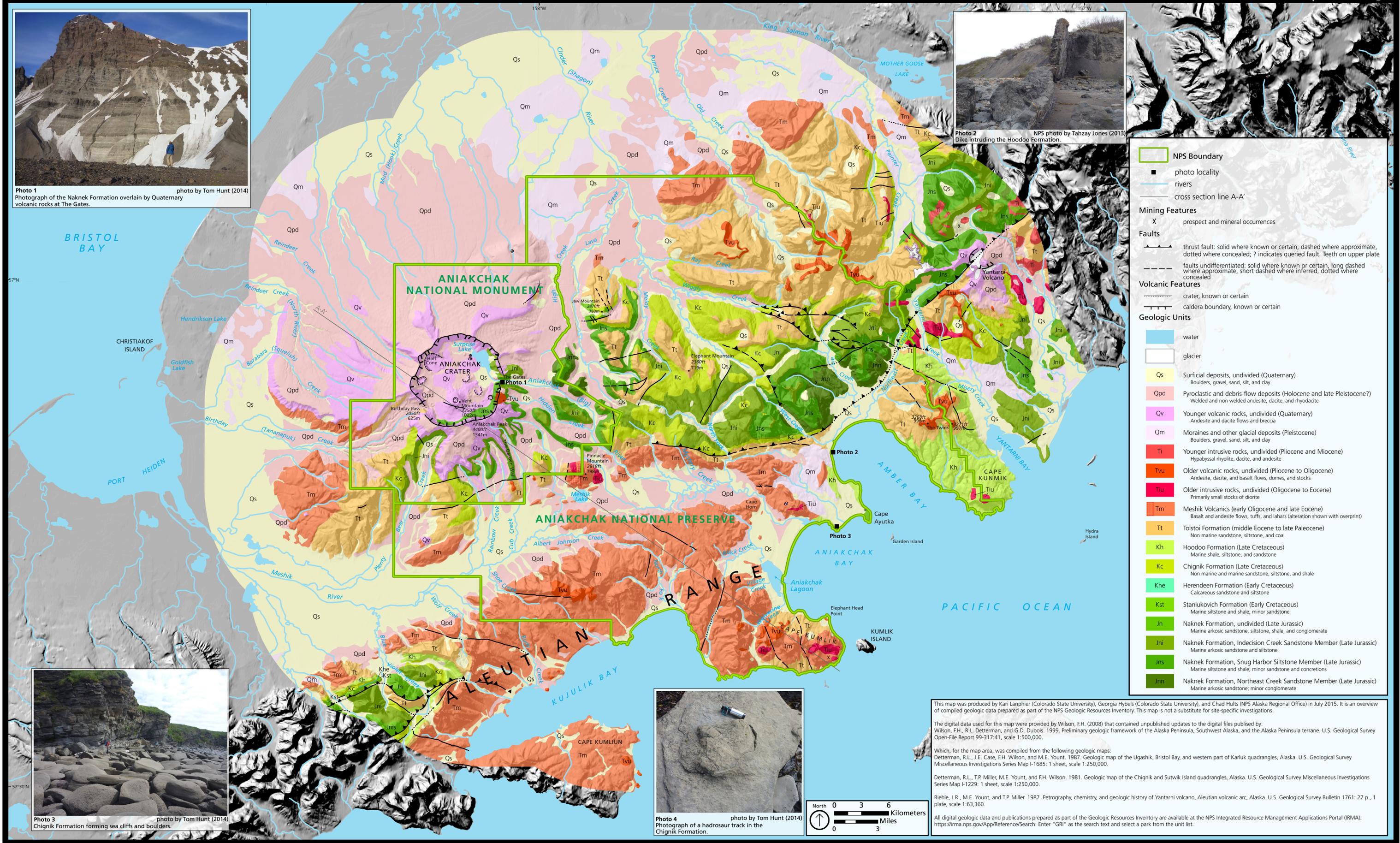


Photo 1
Photograph of the Naknek Formation overlain by Quaternary volcanic rocks at The Gates.
photo by Tom Hunt (2014)



Photo 2
Dike intruding the Hoodoo Formation.
NPS photo by Tahzay Jones (2013)



Photo 3
Chignik Formation forming sea cliffs and boulders.
photo by Tom Hunt (2014)



Photo 4
Photograph of a hadrosaur track in the Chignik Formation.
photo by Tom Hunt (2014)

Legend

- NPS Boundary
- photo locality
- rivers
- cross section line A-A'

Mining Features

- X prospect and mineral occurrences

Faults

- thrust fault: solid where known or certain, dashed where approximate, dotted where concealed; 7 indicates queried fault. Teeth on upper plate
- faults undifferentiated: solid where known or certain, long dashed where approximate, short dashed where inferred, dotted where concealed

Volcanic Features

- crater, known or certain
- caldera boundary, known or certain

Geologic Units

- water
- glacier
- Qs Surficial deposits, undivided (Quaternary)
Boulders, gravel, sand, silt, and clay
- Qpd Pyroclastic and debris-flow deposits (Holocene and late Pleistocene?)
Welded and non welded andesite, dacite, and rhyodacite
- Qv Younger volcanic rocks, undivided (Quaternary)
Andesite and dacite flows and breccia
- Qm Moraines and other glacial deposits (Pleistocene)
Boulders, gravel, sand, silt, and clay
- Ti Younger intrusive rocks, undivided (Pliocene and Miocene)
Hypabyssal rhyolite, dacite, and andesite
- Tvu Older volcanic rocks, undivided (Pliocene to Oligocene)
Andesite, dacite, and basalt flows, domes, and stocks
- Tiu Older intrusive rocks, undivided (Oligocene to Eocene)
Primarily small stocks of diorite
- Tm Meshik Volcanics (early Oligocene and late Eocene)
Basalt and andesite flows, tuffs, and lahars (alteration shown with overprint)
- Tt Tolstoi Formation (middle Eocene to late Paleocene)
Non marine sandstone, siltstone, and coal
- Kh Hoodoo Formation (Late Cretaceous)
Marine shale, siltstone, and sandstone
- Kc Chignik Formation (Late Cretaceous)
Non marine and marine sandstone, siltstone, and shale
- Khe Herendeen Formation (Early Cretaceous)
Calcareous sandstone and siltstone
- Kst Staniukovich Formation (Early Cretaceous)
Marine siltstone and shale; minor sandstone
- Jn Naknek Formation, undivided (Late Jurassic)
Marine arkosic sandstone, siltstone, shale, and conglomerate
- Jni Naknek Formation, Indecision Creek Sandstone Member (Late Jurassic)
Marine arkosic sandstone and siltstone
- Jns Naknek Formation, Snug Harbor Siltstone Member (Late Jurassic)
Marine siltstone and shale; minor sandstone and concretions
- Jnn Naknek Formation, Northeast Creek Sandstone Member (Late Jurassic)
Marine arkosic sandstone; minor conglomerate

This map was produced by Kari Lanphier (Colorado State University), Georgia Hybels (Colorado State University), and Chad Hults (NPS Alaska Regional Office) in July 2015. It is an overview of compiled geologic data prepared as part of the NPS Geologic Resources Inventory. This map is not a substitute for site-specific investigations.

The digital data used for this map were provided by Wilson, F.H. (2008) that contained unpublished updates to the digital files published by Wilson, F.H., R.L. Dettlerman, and G.D. Dubois. 1999. Preliminary geologic framework of the Alaska Peninsula, Southwest Alaska, and the Alaska Peninsula terrane. U.S. Geological Survey Open-File Report 99-317-41, scale 1:500,000.

Which, for the map area, was compiled from the following geologic maps: Dettlerman, R.L., J.E. Case, F.H. Wilson, and M.E. Yount. 1987. Geologic map of the Ugashik, Bristol Bay, and western part of Karluk quadrangles, Alaska. U.S. Geological Survey Miscellaneous Investigations Series Map I-1685: 1 sheet, scale 1:250,000.

Dettlerman, R.L., T.P. Miller, M.E. Yount, and F.H. Wilson. 1981. Geologic map of the Chignik and Sutwik Island quadrangles, Alaska. U.S. Geological Survey Miscellaneous Investigations Series Map I-1229: 1 sheet, scale 1:250,000.

Riehle, J.R., M.E. Yount, and T.P. Miller. 1987. Petrography, chemistry, and geologic history of Yantarni volcano, Aleutian volcanic arc, Alaska. U.S. Geological Survey Bulletin 1761: 27 p., 1 plate, scale 1:63,360.

All digital geologic data and publications prepared as part of the Geologic Resources Inventory are available at the NPS Integrated Resource Management Applications Portal (IRMA): <https://irma.nps.gov/App/Reference/Search>. Enter "GRI" as the search text and select a park from the unit list.

