

Generalized Geologic Map of Alaska

by
M.B. Werdon¹, D.J. Szumigala¹, and G. Davidson²

2000

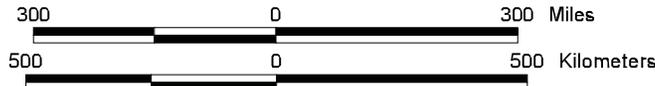
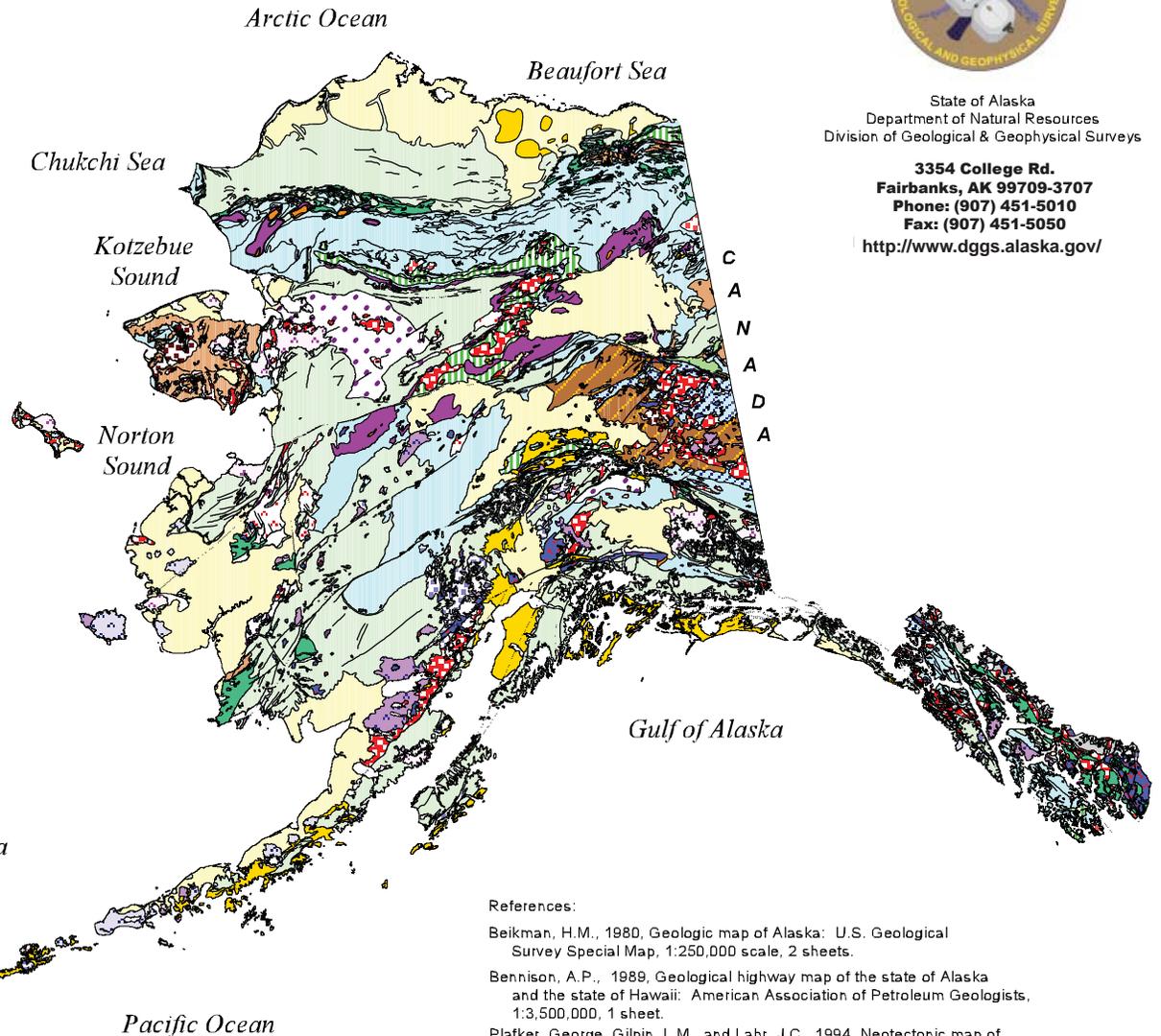
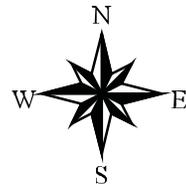


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- Geologic Units**
- Ice/Water
 - Quaternary sedimentary
 - Quaternary volcanic
 - Quaternary/Tertiary volcanic
 - Tertiary sedimentary
 - Tertiary volcanic
 - Tertiary plutonic
 - Tertiary/Mesozoic sedimentary
 - Tertiary/Mesozoic volcanic
 - Tertiary/Mesozoic plutonic
 - Mesozoic sedimentary
 - Mesozoic volcanic
 - Mesozoic plutonic
 - Mesozoic/Paleozoic sedimentary
 - Mesozoic/Paleozoic volcanic
 - Mesozoic/Paleozoic plutonic
 - Mesozoic/Paleozoic ultramafic
 - Paleozoic metamorphic
 - Paleozoic sedimentary
 - Paleozoic igneous
 - Paleozoic/Precambrian metamorphic
 - Paleozoic/Precambrian sedimentary
 - Paleozoic/Precambrian igneous
 - Precambrian sedimentary
 - Unmapped
 - Faults



References:

- Beikman, H.M., 1980, Geologic map of Alaska: U.S. Geological Survey Special Map, 1:250,000 scale, 2 sheets.
- Bennison, A.P., 1989, Geological highway map of the state of Alaska and the state of Hawaii: American Association of Petroleum Geologists, 1:3,500,000, 1 sheet.
- Plafker, George, Gilpin, L.M., and Lahr, J.C., 1994, Neotectonic map of Alaska: in Plafker, G., and Berg, H.C., eds., The Geology of Alaska, Geology of North America, v. G-1: Geological Society of America, plate 12, scale 1:2,500,000.

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This is the read-me file for the page-size geologic map of Alaska by M.B. Werdon, D.J. Szumigala, and G. Davidson (2000).

The original source of the geologic polygons in this simplified geologic map of Alaska is the geologic map by Beikman (1980). The unmodified geologic polygons, and complete projection information for the Beikman geologic map, is provided on the USGS web site: <http://agdc.usgs.gov/data/usgs/geology/metadata/beikman.html> . A brief summary of their projection information follows: Albers Conical Equal Area; Geodetic model: Horizontal datum name = North American Datum of 1927; Ellipsoid name = Clarke 1866. For the ArcView shape files available on the DGGS web site, we set the view window in ArcView to Projections of the World, Geographic projection for printing the page-size geologic map of Alaska.

The original source of the faults theme is Plafker and others (1994). If you zoom in to look at the details of the map, you will note that the faults theme doesn't quite match the geologic theme. The faults are from a different source (Plafker and others, 1994) than the Beikman map (since the Beikman faults are currently not available digitally). The faults coverage was in a different projection, and so we re-projected it to as closely as possible match the faulted geologic contacts in the Beikman map. Although the match is not exact, this geologic map of Alaska is intended to be printed on 8.5 inch by 11 inch paper, and at that scale, the slight offset in the faults is not distinguishable.

In addition to grouping the original geologic units by Beikman (1980) into a simplified age and rock type classification, we changed the geology in the northern Brooks Range to approximate the geology in Bennison (1989). Other smaller changes were also made on specific units based on new ages for plutons, and individual geologists recommendations based on their unpublished work in specific areas.

Some polygon shapes have been modified and simplified for visual clarity. Most polygon shapes were left untouched, but in areas with complex irregular polygon shapes, the boundaries were straightened. Most of the changes were made to the glaciated areas of the Alaska Range and in Southeast Alaska.

Data sources:

Beikman, H.M., 1980, Geologic map of Alaska: U.S. Geological Survey Special Map, 1:250,000 scale, 2 sheets.

Bennison, A.P., 1989, Geological highway map of the state of Alaska and the state of Hawaii: American Association of Petroleum Geologists, 1:3,500,000 scale, 1 sheet.

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