

First Digital Geologic Map of Alaska Published



A new digital geologic map of Alaska has been released, providing land users, managers and scientists geologic information for the evaluation of land use in relation to resource extraction, conservation, natural hazards and recreation. The map gives visual context to the abundant mineral and energy resources found throughout the state of Alaska in a beautifully detailed and

accessible format.

Suzette Kimball, USGS's newly confirmed director, said she is pleased that Alaska now has a state-wide digital map detailing surface geologic features of this vast region of the United States that is difficult to access. This geologic map provides important information for the mineral and energy industries for exploration and remediation strategies. It will enable resource managers and land management agencies to evaluate resources and land use, and to prepare for natural hazards, such as earthquakes.

The data contained in this digital map will be invaluable, said National Park Service director Jonathan B. Jarvis. He described it as a great resource which especially enhances the capacity for science-informed decision-making for natural and cultural resources, interpretive programmes and visitor safety.

Senator Lisa Murkowski from Alaska stated better understanding of Alaska's geology is vital to the state's future. The new map makes a real contribution to the state, from the scientific work it embodies to the responsible resource production it may facilitate. Projects like this one underscore the important mission of the U.S. Geological Survey, and Murkowski is thankful to them for completing it.

References

The map is a completely new compilation, carrying the distinction of being the first 100 percent digital statewide geologic map of Alaska. It reflects the changes in our modern understanding of geology as it builds on the past. More than 750 references were used in creating the map, some as old as 1908 and others as new as 2015. As a digital map, it has multiple associated databases that allow creation of a variety of derivative maps and other products.

This work is an important synthesis that will both increase public access to critical information and enhance the fundamental understanding of Alaska's history, natural resources and environment, said Mark Myers, commissioner of Alaska's Department of Natural Resources. He applauds the collaborative nature of this effort, including the input provided by the Alaska Division of Geological and Geophysical Surveys, which will be useful for natural disaster preparation, resource development, land use planning and management, infrastructure and urban planning and management, education, and scientific research.

Geologists and resource managers alike can utilise this latest geologic map of Alaska, and a lay person can enjoy the colourful patterns on the map showing the state's geologic past and present.

Past and present

More than other areas of the United States, Alaska reflects a wide range of past and current geologic environments and processes. The map sheds light on the geologic past and present. Today, geologic processes are still very important in Alaska with many active volcanoes, frequent earthquakes, receding and advancing glaciers and visible climate impacts.

This map is the continuation of a long line of USGS maps of Alaska, reflecting ever increasing knowledge of the geology of the state, said Frederic Wilson, USGS research geologist and lead author of the new map. In the past, starting in 1904, geologic maps of Alaska were revised once a generation; this latest edition reflects major new mapping efforts in Alaska by the USGS and the Alaska state survey, as well as a revolution in the science of geology through the paradigm shift to plate tectonics, and the development of digital methods. Completion of this map celebrates the 200th anniversary of the world's first geologic map by William Smith of England in 1815.