

ALASKA DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

FY14 Project Description

ALASKA GEOLOGIC MATERIALS CENTER

The Alaska Geologic Materials Center (GMC) in Eagle River holds nonproprietary rock core and cuttings that represent nearly 13 million feet of exploration and production drilling (77,000 linear feet of core) on Federal, State, and private lands in Alaska, including the Alaska outer continental shelf. Additionally, the collection holds: more than 260,000 linear feet of diamond-drilled hard-rock mineral core, representing more than 1,800 exploratory boreholes; rock samples from more than 1,650 oil and gas exploratory or production wells; samples for geotechnical boreholes; and numerous surface rock and sediment samples. The GMC also maintains extensive geochemical data and reports derived from third-party sampling, and has an archive of more than 190,000 processed slides, including petrographic thin sections and paleontological glass slides derived from this rock.

The GMC is operated by the Alaska Department of Natural Resources, Division of Geological & Geophysical Surveys (DGGS), with support from cooperating government agencies that include the U.S. Bureau of Land Management (BLM), U.S. Geological Survey (USGS), U.S. Bureau of Ocean Energy Management (BOEM), and Alaska Oil and Gas Conservation Commission (AOGCC). The mission of the GMC is to permanently archive, index, protect, and make available for public inspection accessible geologic materials and related data to help advance exploration and knowledge of Alaska's natural resources. The chief user of the GMC is the oil and gas industry, although use by the minerals industry, government, engineering firms, and academic institutions is increasing.

Collaboration between DGGS management, the Department of Natural Resources Commissioner's Office, the Department of Administration, ECI/Hyer, and the Governor's Office helped secure a new building for the GMC. On July 2, 2013, the Alaska Department of Administration officially acquired the Debarr Road Sam's Club warehouse to house the new Geologic Materials Center. The new location will offer 100,000+ square feet of warehouse storage with 18-foot-tall, organized shelving and will utilize the building's existing loading docks for delivery of additional core samples. The larger space will accommodate many years of sample growth, research, and climate-controlled preservation.

Features and services available at the new facility will include: a 2,500 square foot core viewing room; three private core viewing rooms; full-spectrum lighting in the viewing areas; a conference room with A/V equipment; a sample processing room with slabbing saws and plugging drill; a core photography setup; petrographic microscope upgrades; and available shelf space for proprietary samples.

Architectural and engineering design work will be completed in early 2014, while renovations to the facility, including upgrading the concrete slab and installing heavy-duty shelving to accommodate the samples, and construction of private viewing rooms and spaces for staff and the public will continue through summer and fall 2014. Samples from the Eagle River location will be transported to the new facility (fig. 1) in fall 2014, with an opening date for the new facility slated for mid-September 2014.

“A geologist’s ability to perform modern analyses on these unique samples is paramount for responsible development of Alaska’s vast resources. It is critical that access to and protection of this valuable resource be improved and updated.”

Robert Swenson, DNR
Deputy Commissioner



Figure 1. Artist's rendering of the new GMC at the Penland Parkway location.

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In anticipation of the upcoming move, GMC staff members have been proactive and hard at work improving the quality of the sample inventory and establishing a transfer plan. Now that the new facility is a reality, 2013 saw the beginning of a major, year-long project with DGGs programmers and IT staff to completely redesign the GMC inventory database and sample-tracking system. The new database system will provide: (1) the ability for clients to view and query the inventory in near-real-time via a web-map interface; (2) real-time inventory tracking, redundancy, and backup capabilities; and (3) a more efficient framework to manage the expected increase in client scheduling, visitor information, and service fees as a result of expanded public usage and services at the new GMC facility. The new database structure will support web-based searches for the public and give staff members the ability to retrieve inventory information on the fly from a tablet device directly from the warehouse floor. Just over 80 percent of the current inventory has been loaded into the new database as of January 2014.

GMC interns completed 33 percent of a large-scale inventory project to drastically improve the quality of the DGGs and oil and gas outcrop collections. The GMC's outcrop inventory is not currently available online and this project, when completed, will add more than 80,000 newly searchable records to the web. The project involves confirming the samples inside every box and linking related location, fossil, and description information to each sample. Approximately 1,275 boxes have been inventoried, generating an impressive 19,585 sample records.

Contract curator and former Alaska State Geologist Don Hartman completed the first step of a major inventory project involving the GMC's Irv Tailleir U.S. Geological Survey Rock Collection. The contents of all 37 cabinets, totaling 333 drawers and thousands of samples collected between 1950 and 1991, have been documented and indexed (fig. 2). Former GMC Curator John Reeder, John Kelley (U.S. Geological Survey), and Brian Tailleir, son of Irv Tailleir, rescued the 12,000 pounds of samples from destruction in 2006.



Figure 2. Outcrop samples collected in 1968 from Anuk and Tingmerkpuk creeks are part of the Irv Tailleir U.S. Geological Survey Rock Collection at the GMC.