

ALASKA DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

FY2015 Project Description

GEOLOGIC MATERIALS CENTER (GMC)

The Alaska Geologic Materials Center (GMC) in Eagle River holds nonproprietary rock core and cuttings that represent nearly 14 million feet of exploration and production drilling (77,500 linear feet of core) on Federal, State, and private lands in Alaska, including the Alaska outer continental shelf. Additionally, the collection holds more than 280,000 linear feet of diamond-drilled hard-rock mineral core, representing more than 1,800 exploratory boreholes; rock samples from more than 1,700 oil and gas exploratory or production wells; samples from 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 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, 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. Chief users of the GMC are the oil and gas industry, with substantial visits by the minerals industry, government agencies, engineering firms, academic institutions, and the general public.

It has been more than a year since the Alaska Department of Administration officially acquired the Debarr Sam's Club warehouse to house the new GMC. The well-attended ribbon-cutting ceremony on October 29, 2014, at the new facility in Anchorage included a keynote address by Governor Parnell and marked the successful completion of renovation upgrades to the new Alaska GMC (fig. 1). Although the Center's geologic sample collection will not be transferred to the new site until spring 2015, a great deal of progress was made at the Eagle River site in preparing for the relocation.

GMC staff successfully completed all necessary preparations prior to the originally planned August 4, 2014, relocation date, which included (1) curating damaged samples and reboxing thousands of others, (2) entering tens of thousands of new items into the inventory database, (3) performing a shelf-by-shelf inventory audit for more than 100,000 sample boxes, (4) packing all office supplies, lab equipment, maps, reports, and tools, and (5) establishing logistical plans and relocation protocols with the moving contractor.

In preparation for the move, GMC staff members have been working to improve the quality of the sample inventory. The year 2014 saw the successful completion of a major, year-long project with DGGS programmers and IT staff to completely redesign and repopulate the GMC inventory database and sample-tracking system.

The new database system will (1) give clients the ability to view and query the inventory in near real-time via a web-map interface and save their results in a variety of useful formats, (2) enable real-time inventory tracking, redundancy, and backup capabilities, and (3) provide 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 facility. Additional computer code has been written to quickly import new sample data from the AOGCC, and inventory templates are being refined to better assist those who wish to donate samples to the GMC.

The successful completion of renovation upgrades to the new facility has opened the door for many potential new donations from the oil & gas and mining industries, federal agencies, engineering firms, and academia. The USGS will be donating its



Figure 1. Former Governor Sean Parnell has some help cutting the ribbon at the new Alaska GMC.

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entire Anchorage collection, turning over an impressive 260 pallets of samples and related data to the state. In October and November of 2014, Linc Energy and Goldrich Mining Corp. donated six pallets of core from their Umiat #18 oil and gas well and 22 pallets of core from their prospect in the Chandalar Quadrangle (~180 miles north of Fairbanks), respectively. We are excitedly anticipating additional potential large donations from Calista Corp./Nyac Gold LLC, the Alaska Volcano Observatory, Alaska Earth Sciences, Inc., ConocoPhillips, BPXA, and Great Bear Petroleum LLC. By investing in a much larger, modern building, the State has now made these donated samples more accessible, dramatically helping the GMC accomplish its mission.

Work is underway to improve the quality and accessibility of the GMC's Bureau of Mines core and BLM pulp collections. Both sets of samples are the focus of recent reanalysis projects, where new data is collected using the latest laboratory techniques. More than 40 drawers, containing more than 13,000 sample envelopes of powdered rock, represent tens of thousands of samples collected throughout the state over a period of many years. The Bureau of Mines core, representing 31 mining prospects and more than 20,000 linear feet of rock drilled in some of Alaska's most remote locations, is stored in 800+ wooden boxes in which the dividers have become compromised by exposure to moisture. As a result, much of the core has become jumbled and moved out of place inside the boxes (fig. 2). Rescuing these irreplaceable geologic samples is critical because of their role in identifying potential new mineral resources and helping to meet the long-term goals of the State's critical and strategic minerals assessment in Alaska. This project is currently ongoing with funding in part by the USGS-led National Geological and Geophysical Data Preservation Program.



Figure 2. As a result of the Congressional closure of the Bureau of Mines in 1995, the GMC received a large sample donation of core from their facility in Juneau. The core is now being restored (left) and made more accessible (right).