

Minutes - Division of Geological & Geophysical Surveys

Geologic Mapping Advisory Board – Fall Meeting

16 October 2024, 1:00 – 3:00 pm

CONVENE Session (Chair)

1:00 pm

Call to order, logistics, roll call

Present - Matthew Hanson, Russell Kirkham, Douglas Kreiner, Kyle Brennan, Nicole Kinsman, Mischa Ellanna, Rob Retherford

Review and approve agenda -Approved without objection

Review and approve previous meeting minutes - Approved without objection

Old Business

Status of STATEMAP program and other DGGGS news

1:10 pm *M. Werdon*

A budget update was given, including projects. DGGGS received the green light on the STATEMAP Geologic Map Compilation Project. FY2024 Earth MRI will run 12/2024 – 12/2027, funds will be used for the Kuskokwim Mineral Belt and Seward Peninsula. DGGGS NNGDPP Grant, FY2023 & FY2024 Proposal – Fully Funded (1:1 Match). FY2025 State Budget - Submitted two requests for General Fund & Authority increases and two request for CIP funds and Authority for one-time projects. Submitted the CORE-CM phase II proposal and two FEMA CTP projects. Awarded NOAA's CRRC project and NOAA's effects of Sea Level Rise opportunity (sub-award 4year project).

Questions/Comments

Q- *R. Kirkham*: What is the timeline for Energy to decide on the CORE-CM awards?

A- *D. Szumigala*: I think it is April.

Q- *K. Johnson*: Getting approval to accept grant money, has that ever been an issue in the past?

A- *N. Kinsman*: It has historically been required of DGGGS to seek out the authority for increase in any federal funds that come in. If I recall correctly, it is grant specific that the Division seeks out those authorities and makes sure the limit is increased on a case-by-case basis.

New Business

1:30 pm

2022 STATEMAP Geologic Map of the Haines-Takshanuk Mountains

M. Larson

Last summer we had a successful campaign wrapping up this two-year project. We were awarded the STATEMAP with state match and ended up revising the original mapping from 400 sq. mi. to 300 sq. mi. This project overlaps and enhances the Haines FEMA CTP project. We were able to take data/mapping on surficial deposits and soils to put into the Landslide Mapping & Susceptibility project. There is currently some internal review for the map and the preliminary interpretive report occurring. Our deadline with USGS is next month.

2023 STATEMAP West Susitna Basin Mapping

1:35 pm *T. Hubbard*

On the north side of the Cook Inlet, west of the Parks Hwy, we focused on locating quantity and quality of construction materials, identifying unstable slopes/potentially active faults, and filling a critical gap in bedrock geologic mapping between two prospective hydrocarbon basins. We also mapped surficial geology to further characterize material distribution, sediment properties, identify geologic hazards, and better constrain timing of glacial events. We have had some follow up meetings with USDA and are hoping that this will lead to future collaborations.

Active Tectonics

1:45 pm *B. Salisbury*

Our purpose was to investigate the western edge of the West Susitna basin for right side up compressional faults. We also spent 5 days trying to reach the project site on the Kahiltna River fault to verify the prevalence of fault scarps. We did see disruption of soft sediments deformation on the southwest portion of the trench that was dug; unfortunately we could not interrupt discreet fault movements, and we won't be able to date any earthquakes at this site.

Bedrock Investigations

1:50 pm *B. Gillis*

New structural data provides insights into the structural architecture of the West Susitna region. Two main focuses were to test an overthrust model for the Beluga Mountains and determine the nature of prominent NNW-trending structural fabric. Beluga Mountain volcanic bedding suggests mainly NW shortening with minor NE shortening. We were trying to get some fault slip data on some of the faults—a few measured surfaces indicate sinistral slip of NNW faults.

2025 STATEMAP New Project Options

2:00 pm

Surficial Geologic Mapping of the lower Kuskokwim River

J. Athey

A direct request was made by Alaska Native communities to collect baseline data on flood & erosion threatening riverine communities. There will be collaboration between Geologic Coastal Hazards and Surficial Geology and potential to work with the Calista corporation on this project. DGGs would potentially pick this as our priority project for next year.

Questions/Comments

C- *M. Hanson*: Doyon may have sonar on the Yukon. They are undertaking running fiber optic on both sides of the bridge going up and down river. That might be something to think about a couple years from now; we would have all that data.

Q- *B. Salisbury*: What's the USDA's interest. Is it just general mapping or something else going on?

C- *T. Hubbard*: They are trying to get good coverage around the state. The folks that reached out to us also reached out to the USDA so that sparked their interest.

C- *M. Werdon*: The DNR's Office of Project Management and Permitting is heavily involved in a big program to bring broad band everywhere they can in Alaska, with the funding they were given.

Geologic, Surficial, and Seafloor Map of Valdez and Chugach Mountains, SC Alaska

2:05 pm *M. Larsen*

This project would help beef up their emergency plan by identifying susceptibility slopes and landslides and give an idea for potential future development in the area. We have been able to collect some lidar in this area. The representative of the City of Valdez informed me they received the NOAA grant to do bathymetry data collecting for the spring of 2025, so we can incorporate our lidar information into the project.

Proposed DGGs-DOT Collaboration

2:10 pm *T. Hubbard*

DGGs could get on some sort of timeline with DOT and target areas where they have an interest in better understanding surface materials and material resources.

Questions/Comments

C- *M. Hanson*: I think Lower Kuskokwim, Valdez, and then the Materials.

Q- *R. Kirkham*: Have you any word on the administration willing to fund the STATEMAP program going into next year?

A- *M. Werdon*: I'm not supposed to say what we submitted. December 15th the Governor's budget comes out and we will know at that point if it makes it in there or not.

Q- *R. Kirkham*: Is there something the mapping board can do at some point in the future, to transmit our support that this is an important project for Alaska and for communities in rural areas?

A- *M. Werdon*: I believe we can't go advocating ourselves but will check on what the board can do.

2022-2025 STATEMAP Map Conversions and Geochronology

2:15 pm *M. Hendricks*

Publication of Alaska Geologic Mapping System status report and second AK GeMS version. Five DGGs attended the DMT conference. We are working to establish a Geologic Mapping Digitizing Master Agreement with a contractor to improve efficiencies. STATEMAP FY 22 & 23 production on schedule, but tight. The production list for FY24 is in development.

2023-2024 NGGDPP Program Status Updates

2:20 pm *K. Johnson*

The Hyperspectral Instrument (HSI) is a prototype as of last month, it is still on schedule for late March. About a 6-month window before the instrument arrives, in the meantime, we palletized 4,000 core pallets and curate 10,000 problem boxes.

P. Goodfellow

Part of the 2023 NGGDPP funding package was digitization of Dr. Gehrel's Southeast Map. By 02/2025 map data should be finalized, publication review 04/2025, and publication and submission to USGS by 06/2025. We compiled and sorted 2003–2015 data for the Minerals Industry Database and are currently working on 2016–2020. 2023 NGGDPP UAF Sample rescue project, work will commence with goal of meeting 06/2025 deadline.

Questions/Comments

Q- Curious if the UAF land department has approached anyone at DGGs or GMC about samples that they still hold in Connex's, primarily from Brady Glacier.

A- *K. Johnson*: It is on the radar but hasn't been resolved yet.

C- *M. Werdon*: I spent months talking with the lands people. I was going to reach out to Steve Masterman, he has been doing partnership critical minerals work at UAF. There is a summit next week I will be approaching him about this.

2:30 pm

2025 NGGDPP HSI: Ingest and Process, Software Obligations and Massive Digital Datasets

K. Johnson

A program manager and Natural Resources Tech II are out for recruitment, these positions will oversee the program, develop SOP, develop the scanning procedures as well as get some data and interpretations out. When we get closer to having the scanner in house and working, we will recruit for a Geologist II and a second Tech II to help with moving 3 million lbs. of boxes. The plan is to move 80,000 boxes through the scanner.

We are going to have to integrate FAIR data standards, making the programing base more efficient and resilient. Part of the process of digital datasets will be to build a massive local storage cluster, provide accessibility beyond GMC, and crunch very large spectral matrices.

Questions/Comments

Q- Do you plan in the long term to then serve clients with specific needs for hyperspectral scanning or is this all about saving the data we already collected. Could an oil and gas company say for instance come in with new core?

A- *K. Johnson*: We are examining that. There is some contractual considerations we must go through. We've talked generically with some of the NGGDPP hierarchy; they are open to the idea but should talk to their contractual person to see what those opportunities are. If we did scan all the legacy core, NGGDPP might consider the instrument as SOA's, and we would be able to scan industry core. We are looking into a fee structure for the scanning and/or the interpretation of data.

C- *Unknown*: You might need to be careful about funding or any grants that come through that have stipulations that are contrary to your non-cloud-based storage.

C- *K. Johnson*: We haven't encountered that yet, but something we should be aware of, thank you.

NGGDPP Proposal: BLM North Slope Data Recover

2:45 pm

2025 National Geological and Geophysical Data Preservation Program Options

P. Goodfellow

We have received a total of 32 pallets of unpublished documents, microfiche/microfilm and analog computer records dating back to the turn of the twentieth century. These documents represent 100 plus years of energy and mineral surveys conducted in AK, including BLM Bureau of Mines information dating back to 1916, coal surveys in Healy, seismic surveys from NPR-A 1968-1985, Kenai Peninsula Drilling 1960-1990s and ANWR oil/gas Survey 1978-1985. Project proposal is for DGGs to scan all documents and make them available through online database. BLM and ANWR would not be made public without approval on release of internal documents.

Public Comments

2:55 pm

P. Goodfellow: Chris thinks it is something that is doable. One big problem is getting the equipment for the 9-track tapes to interpret this data properly, first we retrieve the data, then find a compatible software.

M. Hanson: At Doyon we investigated a company in Texas that could pull the data off the reels, but you would have to bring it down to them.

P. Goodfellow: This data doesn't exist anywhere else, if it gets lost/damaged in the mail that ends it.

Unknown board member: These two projects are good; I encourage supporting them.

ADJOURN

3:00 pm