Public-data File 86-38

DIVISION OF GEOLOGICAL AND GEOPHYSICAL SURVEYS
MONTHLY REPORTS FOR JULY, AUGUST, AND SEPTEMBER 1976

By

Staff

Alaska Division of
Geological and Geophysical Surveys

June 1986

THIS REPORT HAS NOT BEEN REVIEWED FOR
TECHNICAL CONTENT (EXCEPT AS NOTED IN
TEXT) OR FOR CONFORMITY TO THE
EDITORIAL STANDARDS OF DGGS.

794 University Avenue, Basement
Fairbanks, Alaska 99709
MEMORANDUM
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross G. Schaff
State Geologist

FILE NO:

FROM: Steve Hackett
Geophysicist

DATE: September 24, 1976

TELEPHONE NO:

SUBJECT: Monthly Report - September

A. Consultations:

1. State Agency

1. DGGS (Schaff) 9/6/76 Brooks Range geophysics Summary report of 1976 field work.
2. DGGS (Eakins) 9/20/76 Brooks Range Discussions of geophys. field work.
3. DGGS (Lyle) 9/21/76 L. Cook Inlet Rock samples for physical property determination.
4. DGGS (Larson) 9/22/76 Publications Final editing on paper in Geologic Report 50.

II. Federal

3. USGS (Grybeck) 8/13 - Brooks Range geology Observations and discussions of mineral deposits in west-central Brooks Range.
4. USGS (Grybeck) 9/21/76 Brooks Range geophys. Outlining geophysical projects and synthesis deadlines.
III. Contracts

<table>
<thead>
<tr>
<th>Agency</th>
<th>Date</th>
<th>Topic</th>
<th>Results</th>
</tr>
</thead>
</table>

B. Research

1. Field work - west-central Brooks Range (see memo to Schaff 9/6/76).

2. Brooks Range geophysical.

   - Finished provisional aeromagnetic interpretation of Survey Pass quadrangle.
   - Acquired 1:250,000 scale LANDSTAT photos; beginning structural interpretations.

3. N. Flank geophysical.

   - Gravity data reduction (Healy quadrangle) in progress.


   - Gravity data reduction (Talkeetna A-1, B-1); Talkeetna Mtns. A-6, B-6; Tyonek D-1, Anchorage D-8) in progress.

5. Geophysical computer library.

   - Still outlining requirements for setting up quantitative interpretations and inquiring about available programs.

6. FY-78.

   - Submitted short note to Schaff outlining recommendation for future geophysical programs.

C. Status of reports and publications

1. AOF-100 - available and released to public in September.

2. Ruby Ridge geologic report - working on finalizing aeromagnetic profile.

3. Geologic report 49 - final draft is typed, final editing of figures and plates in progress.

4. Speculative evolution of Shelikof Trough - text is finalized, drafting of figures needs to be completed.
5. Provisional interpretations of geophysical data in Ambler River, Survey Pass quadrangles — integrating geologic information and structural interpretations of LANDSTAT photo mosaic.

D. Miscellaneous

1. USGS (Alaskan Branch & Theoretical Geophysical Branch) will provide help and facilities to expedite processing and reduction gravity data acquired during 1976 field season.

2. John Baxandall, DNR System Analyst, will assist in adapting geophysical modelling and data reduction programs. A meeting is scheduled in mid-October to discuss needs and requirements.
MEMORANDUM

TO: Ross G. Schaff
   State Geologist

FROM: William M. Lyle
   Petroleum Geologist

DATE: September 3, 1976

FILE NO:
TELEPHONE NO:
SUBJECT: Monthly Geological Report

State of Alaska

Kodiak - Sitkanak, Sitkalidak & Chirikof Island Report

This report is on schedule and most of the data has been processed; porosity, permeability, parts per million hydrocarbon and basin maturity, etc. We have a target date of early Spring 1977. Interpretation of these results are in progress. Geochem samples are in Fairbanks for processing.

Lower Cook Inlet

A report is currently being prepared and is nearly on schedule. Most of the ran data has been received and drafting is in progress.

Icy Bay

Five potential development sites were visited and examined. A report on each of these areas will be finalized this week.

Miscellaneous

Numerous calls have been handled regarding water well data, access maps, Open File 50, topographic maps, gravel studies, etc.

The state mineral collection was removed from the lands building and temporarily placed in storage.
TO: Ross G. Schaff  
State Geologist

FROM: W. M. Lyle  
Petroleum Geologist

SUBJECT: Monthly Report

Kodiak-Lower Cook Inlet Project

All samples have been sent out for processing. Work has been curtailed on this project until other projects with a higher priority are completed.

Lower Cook Inlet Draft Environmental Impact Statement Review

Work is in progress to review this statement.

Cape Chiniak

Two days were spent on this site and a report is being prepared. This should be ready in a week or ten days.

Oil Map

I assisted the other petroleum geologists in DGGS and DOG in preparing a lease evaluation map on 50,000 acre blocks throughout the State.
MEMORANDUM
State of Alaska

TO: Ross G. Schaff
   State Geologist

FROM: Wyatt Gilbert
   Geologist

DATE: July 28, 1976

FILE NO:

TELEPHONE NO:

SUBJECT: Monthly report, July 1976

The following is a brief outline of my activities for May 25-July 25. A more complete summary of field results will be submitted at end of August.

May 25-June 1
1. Finished revised draft of Ruby Ridge report (southwestern Brooks Range).
2. Organized field program.

June 2-13
1. Mapped bedrock geology of Healy D-6 quadrangle and collected 75 stream sediment samples.

June 16-22
1. Examined Eielson deposits and surrounding geology with Tom Bundtzen.

June 23-29
1. Mapped metamorphic sedimentary rocks in the Mt. Sheldon area and identified the trace of the Hine Creek fault.

June 30-July 6
1. For office, met with Ross Schaff July 6 in informal planning session.

July 7-12
1. Completed mapping of Healy D-6 quadrangle with Dick Reger and collected 50 additional stream sediment samples. Completed examination of townships identified by Division of Lands.

July 14-25

Field program is on schedule and yielding important new information. Central Alaska Range field program should be complete by August 31.
MEMORANDUM

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross G. Schaff
State Geologist

DATE: September 8, 1976

FILE NO:

TELEPHONE NO:

SUBJECT: Monthly Report - August

FROM: Wyatt G. Gilbert
Mining Geologist

July 26 - In office.

July 27 - Aug. 5 - Completed mineral resource evaluation of North Flank of central Alaska Range, assisted by Tom Bundtzen.

Aug. 6 - 8 - In Fairbanks.

Aug. 9 - 25 - Completed geologic mapping along Hines Creek fault in Healy quadrangle.

The 1976 field season is now over and with the completion of essentially all geologic field work along the north flank of the central Alaska Range. The new geologic information gained about Alaska Range tectonics and North Flank mineralization is particularly informative and exciting. During the next week or two I will prepare a more detailed status report on the Division's central Alaska Range program.
State of Alaska

MEMORANDUM
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross G. Schaff
State Geologist

FROM: Wyatt Gilbert
Mining Geologist

DATE: September 24, 1976

FILE NO:

TELEPHONE NO:

SUBJECT: Monthly report - September 1976

August 26 - September 12

1. Organized rock samples and field gear.
2. Completed moving to new office.
3. Prepared thin section chips.
5. Worked on draft of Mt. Galen volcanic paper.
7. Discussed Calico Creek geology with C. Nye (University of Alaska).
8. Discussed 1976 field season and future cooperation with Chuck Hawley.

September 13 - 25

1. Began to analyse geochemical data from Healy D-5 and D-6 quadrangles.
2. Worked on Alaska Range resource evaluation requests from ADL Planning Section.
MEMORANDUM

TO: Ross G. Schaff
State Geologist

FROM: Richard D. Reger
Geologist

DATE: July 30, 1976

FILE NO:

SUBJECT: Monthly Report, July

State of Alaska

A. Consultations

I. State

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<th>Agency</th>
<th>Date</th>
<th>Topic</th>
<th>Results</th>
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<tbody>
<tr>
<td>1. Div. of Parks</td>
<td>6/29</td>
<td>Results of Delta Junction field work</td>
<td>Found 1 site on state land</td>
</tr>
<tr>
<td>(Doug Reger)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Div. of Parks</td>
<td>7/28</td>
<td>Results of Alaska Range field work</td>
<td>Found several sites, will send map locations and surface artifacts</td>
</tr>
<tr>
<td>(Chuck Holmes)</td>
<td></td>
<td></td>
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</tbody>
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II. Other

1. Woodward-Clyde Consultants, Inc. (7/1)
   Publication of Big Delta A-4 geologic map
   Agreed to provide data for publication of ADGGS map next year

2. Arizona State University (7/9)
   Publication of Big Delta A-4 geologic map
   Agreed to provide data for publication of ADGGS map next year

B. Conferences, symposia, etc. (attended)

1. Gave lecture presentation on permafrost and surficial geology of Alaska to visiting class (Geography of Alaska) from Illinois State University with Wyatt Gilbert and Tom Bundtzen on 7/2/76.

C. Research

1. 7/7 thru 7/11 did field work in Healy D-6 quadrangle. Evaluated 13 townships for ADL.

2. 7/13 thru 7/26 did field work in Healy D-1 quadrangle. Completed mapping of surficial deposits.

D. Status of reports and publications

1. Still waiting data input from Troy Pelew, Duane Packer, and Bert Swan for Big Delta A-4 geologic map.
MEMORANDUM

TO: Ross G. Schaff
State Geologist

FROM: Richard D. Reger
Geologist

DATE: August 26, 1976

FILE NO: 

TELEPHONE NO: 

SUBJECT: Progress report, August 1976

A. Consultations

I. State

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<th>Agency</th>
<th>Date</th>
<th>Topic</th>
<th>Results</th>
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<tbody>
<tr>
<td>1. Div. of Parks</td>
<td>8/11</td>
<td>Stratigraphy of site ANC-54</td>
<td>Will send stratigraphic section and description</td>
</tr>
<tr>
<td>(Doug Reger)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Div. of Planning and Research</td>
<td>8/17</td>
<td>ADGGS evaluation for ADL in southern Kenai Lowlands</td>
<td>Report due Dec. 2</td>
</tr>
<tr>
<td>(Dave Hanson)</td>
<td></td>
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</tr>
</tbody>
</table>

II. Other

1. Washington State University (Pete Bowers) 8/6 Stratigraphy of Carlo Creek site Located volcanic ash layer

B. Conferences, symposia, etc. (attended) - none.

C. Research

1. 7/29 through 8/6 - literature research and photo-interpretation of Talkeetna area (Little Willow Creek to Larsen Lake) and southern Kenai lowlands. Evaluation of surficial deposits and geologic hazards for ADL.

2. 8/6 through 8/22 - did field work in Talkeetna area and southern Kenai lowlands. Completed field check.

D. Status of reports and publications

1. Waiting data input from Troy Pweé, Duane Pakker, and Bert Swang for Big Delta A-4 geologic map.

2. More photo-interpretation required to complete evaluations of ADL projects north of McKinley Park, in Talkeetna area, and in southern Kenai lowlands.
A. I was involved in the following consultations or meetings during the period August 24 through September 23, 1976:

1. (9/1) Discussed hydrologist position with Mark Howland.

2. (9/3) Discussed surficial geology of Delta Junction area with Ray Kreig of R and M Consultants, Inc.

3. (9/7-9/8) FY-78 ADGGS project planning meeting in College.

4. (9/8) Discussed proposal for report on geologic hazards of Fairbanks area with Troy Pêwê.

5. (9/13) Meeting with city of Anchorage, Corps of Engineers, and USGS in Anchorage re landslide stability monitoring program.

6. (9/14) Meeting in Anchorage with Alaska Branch (USGS) re FY-78 ADGGS and USGS projects.

7. (9/15) Discussed geologic hazards along proposed NW gase pipeline with Bob Forbes (U. of Alaska).


9. (9/21) Field trip with Bob Forbes (U. of Alaska) to check photogeologic lineaments between Fairbanks and Tok.

B. I conducted research on the following projects during the period August 24 through September 23.

1. Aerial photograph interpretation of geology for ADL Planning and Research section (Dave Hanson) resource evaluation in two areas (13 townships) north of Mt. McKinley National Park (parts of Kantishna River, Healy, and Fairbanks quadrangles).

2. With Cheri Carver set up and started geologic hazards investigations for future reports on Alaska and specific communities. Cheri will begin literature review in about one month. I have just begin my compilation. Have almost completed detailed outline of subjects to be considered. Project will be coordinated with Don McGee.
MEMORANDUM
State of Alaska

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO:
Ross Schaff
State Geologist

FROM:
Tom Bundtzen
Geologist

DATE: August 20, 1976

FILE NO:

TELEPHONE NO:

SUBJECT: Activities from June 25-August 15

1) Continued investigations of the north flank minerals appraisal, Alaska Range from July 6-August 3, involving examinations of existing claim blocks and sulfide zones in the Totatlanika schist terrain Healy D-2 - D-4 quadrangles and Fairbanks A-1 through A-4 quadrangles. These investigations included mapping at one inch = 70 feet of four base metal prospects and 2 producing placer gold mines in the Bonnifield mining district. In addition, several days were spent in the Kantishna River A-1 quadrangle examining state lands north of the D-2 withdrawal for Dave Hansen.

2) Continued working on the 40 mile resource area project, as outlined by D. Hansen. The references have now been gathered and examined and a claim commodity map has been completed.

Cheri Carver has handled the logistics while Gil and myself have outlined the project. Field work will commence August 22nd and end on September 1.

3) Field work in conjunction with the ADL's Delta study area centered on examination of the Richardson gold district from August 11-15. This included geologic mapping of a small area and examining 3 producing placer gold mines.

Contact with other agencies include: a) Consultations with M. Robinson (MIRL) about 40 mile resources; Mark has had previous industry experience in the area. b) Consultations with H. McKibben who owns patented ground in the 40 mile area. c) Gil Monroe who is extremely knowledgeable about past mining history in the area, and d) Jim Barker of the Bureau of Mines.
MEMORANDUM

TO: Ross G. Schaff
    State Geologist

FROM: Tom Bundtzen
    Geologist

DATE: September 2, 1976

FILE NO:

TELEPHONE NO:

SUBJECT: Biweekly Report - August 15-31

State of Alaska

Major work.

1. Conducted geologic field investigations in the Fortymile resource area for David Hansen's planning and research group during the later part of August. These investigations included evaluations of all the known "porphyry copper" prospects staked during 1970-72 in the Tanacross and Eagle quadrangles. We also supported (with our helicopter) Cleland Conwells inspection of a number of placer mines in the Chicken area and a producing antimony mine south of Tok.

2. Attended ADL's Delta planning study meetings on August 28 in Delta Junction. The citizens group there seemed to have interesting responses to goals and objectives established by the planning team.

3. Contacted Dale Wadleigh of BLM, the chief mining engineer of the Fortymile resource area, and had mineral deposits discussions concerning BLM management philosophy.

4. I finally washed the Ford Courier which is under my supervision. Division personnel can't recognize it. Routine maintenance was also performed.
MEMORANDUM
State of Alaska

TO: Ross G. Schaff
    State Geologist

FROM: Tom Bundtzen
      Mining Geologist

DATE: September 24, 1976

FILE NO:

TELEPHONE NO:

SUBJECT: Monthly report - September 1976

1. Major work accomplishment:
   Major emphasis has been on the Fortymile resource area selections for the Division of Policy and Planning. Six overlays including geology, geochemistry, land status, transportation, mining claims, and mineral occurrences will be used in determining the rank of township selectability for the state. 675 geochemical analyses of samples collected during field work will be run by the lab and will add final verification to the mineral occurrences potential in the final report due February 1, 1977.

2. Discussions with Wyatt Gilbert on the final products of the north flank mineral appraisal continue. We'll be open filing much of the geochemical results as soon as they are made available to us.

3. Dale Wadleigh of BLM-Tok sent me an updated version of land status in the Fortymile resource area.

4. Discussed with Dave Snarski, Division of Parks, the possibility of sites of historical importance in the Richardson mining district, Delta planning area.

5. Useful discussions with Jim Barker of the Bureau of Mines, formerly with the Fortymile resource inventory of BLM. Jim has given me access to information he received from private industry concerning prospects in the Fortymile area for exclusive use in the Fortymile selections.

6. Assisted Gene Wald in his inventory of the office property.

7. Researched the possibility of trading the Ford-Courier for a more reliable winter vehicle this fall.

8. Reviewed Cle's Western Miner paper and made corrections or suggestions to the manuscript.
MEMORANDUM
State of Alaska
Department of Natural Resources
Division of Geological & Geophysical Surveys

TO: Ross G. Schaff
State Geologist

FROM: James Riehle
Engineering Geologist

DATE: September 9, 1976
FILE NO:
TELEPHONE NO:

SUBJECT: Report of Activities, 

It was my pleasure to join the DGGS on August 2, 1976, and I look forward with considerable anticipation and optimism to my new position.

A. Consultations:
   None.

B. Conferences and symposia attended:

   First public presentation by U.S. Geological Survey of marine geology data collected by Sea Sounder during 6-week cruise in Lower Cook Inlet and western Gulf of Alaska; held at BLM Building, Anchorage, on August 2, 1976.

C. Research


   2. Began compilation of literature on Gulf of Alaska marine and coastal geology; in particular, have assembled the most pertinent available literature on Seward and Resurrection Bay.

   3. Completed field and literature research for First-stage evaluation of geologic constraints on potential on-shore development at Icy Bay, northeastern Gulf of Alaska. Field research consisted of brief on-site inspection of 5 specific areas in Icy Bay with William Lyle and Mitch Henning, August 15-19, 1976.

   4. Compilation of literature on Gulf of Alaska marine and coastal geology includes the following meetings:


      c) Brief meeting with Mr. Jerry Im, BLM, OCS office (Anchorage) regarding State agency access to, and use of, the considerable quantity of data on marine and coastal geology being filed at the Anchorage BLM-OCS office.
D. Status of Reports and Publications

1. Short report, "Geological Reconnaissance, Cape Chiniak", completed by William Lyle, J. Riehle, and J. Morehouse. The report was requested by the Department of Community and Regional Affairs; an oral presentation with visual aids was made to DPDP and other divisions of DNR.

2. Report on 5 sites at Icy Bay is nearing completion; the report is at the request of DCRA.

3. I helped in final tabulation of the Minerals Areas ranking, for one afternoon only.
MEMORANDUM

TO: Ross Schaff
State Geologist

FROM: James Riehle
Geological Engineer

DATE: October 5, 1976

FILE NO:

TELEPHONE NO:

SUBJECT: Monthly Report
Report Period Aug. 26 to Sept. 25

A. Consultations:

1. Federal

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<tr>
<th>Agency</th>
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<th>Topic</th>
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<tbody>
<tr>
<td>USGS</td>
<td>9-24-76</td>
<td>Seward groundwater and site evaluations</td>
<td>Joint trip to Seward, with likelihood of further cooperation</td>
</tr>
</tbody>
</table>

B. Conferences, symposia, etc.:

None

C. Research:

1. Icy Bay site evaluation completed; still awaiting formal response regarding format of the report from K. Warling.

2. Seward site evaluation undertaken; most of the tables have been completed on 4 particular sites in upper Resurrection Bay. Except for hard-to-get or obscure reports (e.g. Corps of Engineers' data in Seattle), literature search is completed.

D. Status of Reports:

1. Preliminary Investigation of Geologic Factors Bearing on Development of Icy Bay (with W. Lyle); transmitted to D. Hanson on 9-17-76.

2. Seward site evaluation; field observations required to get pictures and some limited data.

E. Miscellaneous:

Invited to join membership of Alaska Geological Society's Environmental Geology Committee.
MEMORANDUM

DATE: July 28, 1976

FILE NO:

TELEPHONE NO:

SUBJECT: Monthly Report, July 1976

FROM: Frank Larson
Publications Specialist

TO: Ross Schaff
State Geologist

DATE: July 28, 1976

FILE NO:

TELEPHONE NO:

SUBJECT: Monthly Report, July 1976

FROM: Frank Larson
Publications Specialist

TO: Ross Schaff
State Geologist

EDITORIAL:

1) Edited geologic report 51-A "Short Notes on Alaskan Geology."

2) Performed routine correspondence, etc. Two weeks vacation.

TYPING:

1) Distributed special report 12, "Alaska's Uranium Potential."

2) Distributed special report 9, "Zeolite Zonation and Mordenite Deposits in the Horn Mountains."

3) Received (but have yet to distribute) geologic report 52, "Clay mineralogy and Petrology of the Coal-Bearing Group near Healy," and special report 14, "Mineral Occurrences in the Upper Wood River, Edgar Creek, and West Fork Glacier Areas."

4) Filing of mining claims to be put on microfilm.

5) Made up and typed 2 forms for the lab.

6) Typed numerous correspondence.

7) Answered phone and did mail.

8) Missing one clerk, Roberta Mann, for most of month (sick leave).

CARTOGRAPHY:

1) Drafted figures for ERDA report (Eakins).
To: Ross G. Schaff  
State Geologist  

From: Frank Larson  
Publications Specialist  

Subject: Progress report for August 1976  

Date: August 24, 1976  

EDITORIAL:  
1) Proofed geologic report 51, "Short Notes on Alaskan Geology."  
2) Edited AOF-102, "Contributions to clay mineralogy and petrology, Cook Inlet Basin," by D. Triplehorn  
4) Miscellaneous correspondence.  
5) Six days annual leave.  

TYPING:  
1) Typed geologic report 51 on composer.  
2) Typed Mines Bulletin on composer.  
3) Typed AOF-102.  
4) Updated and revised information circular 1, "Proper Claim Staking."  
5) Typed several miscellaneous letters and memos, and monthly report. Typed a few rough drafts of reports and articles.  
6) For lab, typed Tom Bundtzen's analysis of his field samples. Was over 1,000 of these.  
7) Filled requests, filed, and answered phones.  
8) R. Mann out 2 weeks on sick leave.  

CARTOGRAPHY:  
1) Drafted plates for ERDA report (Eakins).  
2) Supervised G. Ferrell in drafting job for C. Conwell contribution to geologic report 51.  

MISCELLANEOUS:  
1) Received text portion of geologic report 47, "Teklanika Formation" (W. Gilbert) and special report 11, "Commercial-grade mordenite" (D. Hawkins); plates still at vendor. Will announce in September bulletin.  
2) Received special report 13, "Mineral occurrences near Cantwell" by Hickman and Craddock. Will announce in bulletin.
MEMORANDUM

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross Schaff
    State Geologist

DATE: September 23, 1976

FILE NO:

TELEPHONE NO:

FROM: Frank Larson
    Publications Specialist

SUBJECT: Progress report for September 1976

EDITORIAL:

1) Retrieved open-file report masters from Anchorage and started supplying other agencies on complimentary list with copies they lack.


3) Began paste-up of "Short Notes" geologic report.

4) Moved office of R. Mann and myself to Resources Building.

5) Pasted up new information circular 11, "List of DGGS Reports."

TYPING:

1) Typed "Short Notes" texts on composer.

2) Typed rough drafts for Conwell and Eakins.

3) Typed miscellaneous letters and memos.

4) Helped staple and get Mines and Geology Bulletin in the mail.

5) Miscellaneous xeroxing.

6) Rearranged all the publications in lower office since there is more room now.

7) A lot of filing of open-file reports and correspondence.

8) Answered quite a few requests for information.

CARTOGRAPHY:

1) Continued making plates for ERDA report.

2) Two weeks annual leave.
MEMORANDUM

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross C. Schaff
State Geologist

FROM: Frank Larson
Publications Specialist

DATE: September 1, 1976

FILE NO:

TELEPHONE NO:

SUBJECT: FY 76 Documentation Summary

During FY 76 (7/1/75 - 6/30/76) DGGS issued the following documents.

Biennial Reports


Geologic Reports


Geologic Reports Reissued


Geochemical Reports Reissued


Special Reports


Miscellaneous Papers


Contributions to National Publications


Mines and Geology Bulletin


Information Circulars (New and Revised)


Aeromagnetic Maps

Fifteen released (Baird Mountains B1, B2, C1, C2, D1, and D2; Ambler River B4-6, C4-6, and D4-6.

Open-File Reports

AOF-60 Geology of the Arctic Camp Prospect, Ambler River Quadrangle, Alaska (by Milton A. Wiltse, 1975), map, scale 1:12,000, 41 p. text.


AOF-70 Analysis of Stream-Sediment Samples, Mt. Hayes B-6 Quadrangle, South-Central Alaska (by T.E. Smith, G.L. Kline, J.T. Kline, & N.D. Coursey, 1975), map, scale 1:63,360, table, 4 p. text.

AOF-71 Geochemistry of Stream-Sediment Samples of the Southwestern Ambler River Quadrangle, Alaska (by G.H. Pessel, 1976), map, scale 1:200,000, 2 foldout tables, 3 p. text.

AOF-80 Geologic Map and Structure Sections of Healy C-6 Quadrangle, Alaska (by Wyatt G. Gilbert & Earl C. Redman, 1975), map, scale 1:40,000, 1 p. text.


AOF-83 Radiometric Age Map of Alaska - Aleutian Islands (by D.L. Turner & F.H. Wilson, 1975), map, 10 p. text.

AOF-84 Radiometric Age Map of Alaska - Southwestern Alaska (by D.L. Turner & F.H. Wilson, 1975), map, 12 p. text.

AOF-85 Radiometric Age Map of Alaska - South-Central Alaska (by D.L. Turner & F.H. Wilson, 1975), map, 12 p. text.


AOF-87 Zeolite Deposits of Possible Economic Significance in the Northern Alaska Peninsula (by James A. Madonna, 1975), 27 p., including 5 figs., 2 tables.
AOF-88 Geochemistry of Stream-Sediment Samples of the Southeastern Baird Mountains Quadrangles, Alaska (by G.H. Pessel, 1976), map, scale 1:200,000, 5 foldout tables, 3 p. text.

AOF-89 Commercial-Grade Mordenite Deposits of the Horn Mountains, South-Central Alaska (by D.B. Hawkins, 1975), 35 p., 10 figs., 2 tables.


AOF-99 Lode Claim Groups of the Southwestern Brooks Range Copper Belt, Ambler River and Survey Pass Quadrangles, Alaska (Filed Prior to January 1976) (by J.T. Kline, 1976), 2 maps, scale 1 inch equals 1000 feet, 1 p. text.

AOF-100 Regional Gravity Survey of Beluga Basin and Adjacent Area, Cook Inlet Region, South-Central Alaska (by Steve W. Hackett, 1976), 40 p. text which includes illustrations.

In addition, DGGS distributed 814 biennial reports, 258 miscellaneous papers, 511 miscellaneous publications, 215 bibliographies, 1152 geologic and geochemical reports, 6404 information circulars, 356 laboratory notes and reports, 867 aeromagnetic maps, 126 special reports, and 18,099 Mines and Geology Bulletins. Impressions (xeroxing) made for the public totaled 8778. Also, there were 1386 visitors.
RESOURCE INVESTIGATIONS
MEMORANDUM
State of Alaska

TO: Ross Schaff
State Geologist
Anchorage

DATE: July 28, 1976

FILE NO: Anacorage

TELEPHONE NO: 

SUBJECT: Monthly Report, July 1976

FROM: Gil Eakins
Chief Mining Geologist
College

A. Consultations

I. Federal

1. Wayne Roberts
   ERDA
   6/28
   Discussed ERDA's plans for
   opening on office in Anchorage

2. Lee Morris
   Los Almos Lab
   6/29
   Discussed U sample analyses
   by phone

3. Helen Foster
   USGS
   6/29
   Discussed our Fortymile
   program

II. Miscellaneous

1. Ron Sheradon
   Great Lands Exploration
   6/25
   Wanted information on U
   project we did last summer.
   Sheradon reported he has a
   crew of 15 at Granite Mtn,
   exploring for U; has consid-
   erable geophysical equipment
   and large scintillometer for
   aerial surveys, staked the U
   anomaly at head of Peace River

B. Conferences

1. Fairbanks staff met 7/1 to discuss projects, priorities, and equipment needs.

2. Set up a tour for Jim Patterson, University of Illinois, and party of 12
   with Wyatt Gilbert and Dick Reger.

3. Met with Ross Schaff, Gar Pessel, and Wyatt Gilbert, 7/6, to discuss
   programs and budgets.

C. Research

1. Met with Dan Hawkins, University of Alaska, to set up computer program for
   U, Th, and K₂O data for ERDA project.

2. Mitch Henning assisted me for about two weeks by drafting a set of radio-
   metric survey maps for the ERDA project.
3. Cle Conwell located and sampled the U occurrence at Purkey Pile prospect in the Alaska Range. It is very promising and I hope we can do some work in the area - state land lies on the same intrusives to the southwest.

4. Reviewed "Revised Mining Laws" proposal with Conwell and submitted recommendations.

5. Discussed need to keep Mildred Brown on part time with Conwell. Mildred wants to work part time and can be a tremendous help both to the information office and to the resource section by typing and helping get the Bibliography of Alaskan Geology updated. I strongly recommend continuing to hire Mildred on a part time basis.

Also, Cle suggested Ginny Ferrell might be able to assist Ann Schell with drafting this fall to help catch up on the backlog of maps for reports.
MEMORANDUM
State of Alaska

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross G. Schaff
    State Geologist

FROM: Gil Eakins
    Chief Mining Geologist

DATE: September 24, 1976

FILE NO: 

TELEPHONE NO: 

SUBJECT: Monthly Report - September

A. Consultations - miscellaneous:

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<th>Topic</th>
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<tr>
<td>Jay Gaton, Everett</td>
<td>9/9/76</td>
<td>Discussed the possibilities for sedimentary uranium deposits in Alaska.</td>
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<tr>
<td>Exploration, Salt Lake</td>
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<td>City, Utah</td>
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<tr>
<td>ARCO geologist,</td>
<td>9/21/76</td>
<td>Checking on uranium exploration in Alaska.</td>
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<td>Denver</td>
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<tr>
<td>Mark Ringstad,</td>
<td>9/17/76</td>
<td>Wanted information on scintillometers and borrowed one to examine his property.</td>
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<tr>
<td>local miner</td>
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B. Conferences attended:

Attended half-day meeting on NPR-4, sponsored by BLM in Fairbanks. A summary was sent to you as a memorandum.

C. Research:

1. In the field Aug. 23 - Sept. 3 examining the geology and mineral deposits in the Fortymile area. Now compiling data for Division of Lands to aid in state land selections. Visited most of the mines and prospects in the project area. The compilation of base data is nearly completed. Tom Bundtzen has done most of the map work. We are ready to "prioritize."

2. Assisted Cle Conwell with a short report on the demand and availability of limestone and phosphate rock for agricultural use in Alaska; requested by the Commissioner.

3. Took a one-day field trip with Conwell and Stein to visit active mining operations in the Fairbanks district.

4. The ERDA report is still in the mill. Cheri Carver is in the final stage of compiling the computer run statistical study; and Ann Schell has the maps almost finished.

Miscellaneous:

1. Budget and program meeting, September 7-8, with Ross Schaff and others.

2. Gene Waid spent the week of September 20-24 inventorying the Fairbanks office and lab.

3. Took one day sick leave.
MEMORANDUM

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross Schaff
State Geologist

FROM: Steve Hackett
Geophysicist

DATE: July 28, 1976

FILE NO: [Blank]

TELEPHONE NO: [Blank]

SUBJECT: Monthly Report, July 1976

A. Consultations

1. State

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<td>1. DGGS (Gilbert)</td>
<td>6/28</td>
<td>Ruby Ridge report</td>
<td>edited and looked over rough draft</td>
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<tr>
<td>2. DGGS (McGee)</td>
<td>6/29</td>
<td>Kashwitna-Susitna field program</td>
<td>discussed logistics and field plans</td>
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<td>3. DGGS (Lyle)</td>
<td>6/29</td>
<td>Bruin Bay Fault-Lower Cook Inlet</td>
<td>discussed regional geology and outlined gravity profile lines</td>
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<tr>
<td>4. DGGS (Schaff)</td>
<td>7/13</td>
<td>Brooks Range data-acquisition</td>
<td>request to Div. of Lands outlining information needed during field season</td>
</tr>
<tr>
<td>5. DGGS (Schaff)</td>
<td>7/20</td>
<td>State of Alaska land status</td>
<td>request to Div. of Lands for an up-to-date land status plat (1:250,000 scale) of Brooks Range, S. Alaska Range, Kuskokwim and Yukon areas</td>
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</table>

II. Federal

1. USGS (I. Tailleur) 7/13 Brooks Range field camp logistic and camp problem at Noatak R. - postpone geophysical efforts until Aug.-Sept.

2. USGS (T. Overshine) 7/14 Brooks Range atlas discussed Brooks Range geophysical projects; current and future data needs

III. Contracts

1. Geometrics (Fowler) 7/12 Completion requirements of 1975-76 holding final payment until DGGS receives aeromagnetic contract, data and tapes
2. Geometrics  7/26  Aeromagnetic contract  1975-76 contract has been completed, ok'd for final payment

B. Research

1. Field work - Lower Cook Inlet Geophysical
   - acquired 36 new gravity stations, transecting Bruin Bay fault system and Lower Jurassic sedimentary sections
   - acquired 10 new gravity stations over Tertiary rocks exposed between Red Glacier and Cook Inlet waters.

2. Brooks Range Geophysical
   - finished provisional aeromagnetic interpretation of Ambler River quadrangle
   - integrated recent gravity data with regional geology in Shungnak and Selawik quadrangles

3. N. Flank Geophysical
   - transferred gravity and aeromagnetic data on field maps
   - preparing for field work

4. Kashwitna - Susitna Geophysical
   - transferred gravity and aeromagnetic data of field maps

5. Computer Library
   - inventoried programs, outlining current and future requirements

6. FY-78
   - preparing recommendations for geophysical programs, equipment and personnel needs

C. Status of Reports and Publications

1. AOF 100 - released
2. Ruby Ridge Geological Report - working on aeromagnetic profile
3. Geologic Report 49 - final draft is being typed
4. Speculative evolution of Shelikof Trough - drafting of illustrations needs to be completed
5. Provisional interpretations of geophysical data in Ambler River, Survey Pass quadrangles - working of preliminary interpretation

D. Miscellaneous

1. Preparing for N. Flank (Alaskan Range) and Kashwitna-Susitna River geophysical field projects, July 28-August 10.

2. Outlining computer programmer requirements to adapt geophysical modelling and data reduction programs.
Just a quick note to update you on our activities, accomplishments, and plans.

08/13 Flew to Kotzebue then into USGS camp on Noatak R. arrived 8:00 PM.

08/14 Flew to Angiaak Pass via helicopter, joined Grybeck and two economic geologists, looked over potential tin-bearing granites, occupied 12 new gravity stations, collected rock samples for physical property measurements.

08/15 AM: windy, rainy; PM occupied 10 new gravity stations, flew back to USGS base camp.

08/16 Flew to Siniktanneyak ultramafic complex, occupied 21 new gravity stations, collected rock samples, mapped contacts, structural relationships, and collected geochem and pan samples for Cr, Pt, Sn...

08/17 Flew to Siniktanneyak Mtn, occupied 38 new gravity stations, sampled and mapped complex (completed project).

08/18 Flew to Ambler C-1, C-2, B-1, B-2 quads, occupied 23 new gravity stations, mapped and sampled Shishakshinovik plutonic complex.

08/19 Flew to Survey Pass C-5, C-6, B-5, B-6 quads, occupied 20 new gravity stations, helped Gil Mull map structure (nappes, windows, thrusts: Miss-Dev carbonates) "TEXT BOOK" EXAMPLE OF ALPS BUT EXTREMELY COMPLEX!

08/20 Office work-base camp, plot newly acquired gravity stations. Plan future geophysical work to get good coverage of Ambler River 1:250,000 quadrangle, reduce gravity data, box-up rock samples, and review regional geologic maps and notes, time sheets, diary, reports, etc...

08/21 - 9/7+ Gravity surveys N. half Ambler River quadrangle. Rock sampling, structural mapping and magnetic correlation.

The USGS Camp is tentatively closing down around August 30th. My plans are to work from August 31 - September 7 on the U. Noatak conducting semi-detailed gravity profiles over the plutonic-sedimentary contacts, large aeromagnetic anomaly trending along 67° 40' W, and rock sampling (bulk and oriented samples) of the major rock types separating distinct tectonic styles. Maxson Aviation will fly out the majority of my gear (rocks, geophysical equipment) September 7th to Kotzebue. I plan to take 12 days of accumulated comp time and join friends to float down the Noatak River (September 7 - 21st ± 2 days).

Irv Tailleur and Don Grybeck would like to have me participate in a USGS meeting in late September early October at Menlo Park (USGS expense). Also Irv and I think 2-4 weeks of concentrated work in Menlo Park in November would be extremely beneficial in integrating the regional geology and geophysics of the west-central Brooks Range. This time period would be devoted to working on a presentable and publishable package of existing data...it would be informal workshops with all Brooks Range geologists. Also I could oversee the rapid processing of the newly acquired gravity and rock properties data.
I hope the day-to-day activities are going good for you. Gil Eakins has my address's and contacts in-case-of-an-emergency, etc. I'll write you a summary report and send it out around September 7th to outline our accomplishments, conclusions (if any at that time), and any comments that come to mind. Best wishes DGGS endeavors!

Mit beaten Grussen and Bergheil,

Steve H.

* attached Is Helicopter Time Report --- we are putting in long days 10-12 hours! The weather has been unbelievably good to date.
Dear Ross,

Just a note to update you on my activities, plans, and a brief summary report on the Brooks Range geophysical project:

1. Enclosed is helicopter time sheet, plus worksheet (please return for my records), for appropriate processing.

2. I've spent the past week (Aug. 31-Sept. 6) in the U. Noatak River Valley conducting semi-detailed gravity traverses, rock sampling, and mapping geologic contacts.

   Preliminary results document structural relationships of Cretaceous intrusives and adjacent rocks giving insight on regional structural style in west-Central Brooks Range.

   72 new gravity stations were occupied by foot, 38 strikes and dips, plus geologic contacts mapped, 12 rock samples collected for physical property determination and 42 cumulative miles covered by foot traverse.

3. Took annual leave from Sept 2 at 1:00 PM to Sept. 3 4:30 PM for a little R & R (Recreation-Recuperation). Please fill out appropriate forms and process. A rock sample for you from high places!

4. Planning to fly-out excess gear to Kotzebue and start Noatak River trip on Sept. 7th, weather, water levels, logistics, etc. permitting. We anticipate arriving in Noatak Village by Sept. 21st+ 3 days, then on to Fairbanks via Kotzebue (to pick-up gear) as soon as possible. I'll contact you when I get to the College office.

5. The stay and time working with USGS personnel from Aug. 12-31st was very beneficial. We spent alternate days collecting gravity data-rock samples and studying geology. I spent 3-days working with Don Grybeck and 2 economic geologists looking at mineralized zones along and within the Igikpak intrusive complex; 2 days with Gill Mull, Oil and Gas Div., observing, discussing, and mapping Dev. and Miss. sedimentary rocks and structural relationships. The remaining time was devoted to occupying gravity stations-rock sampling by myself and/or with Irv T. and Chuck Mayfield observing or mapping geology in the Ambler R., Survey Pass, Baird Mtns., Howard Pass or Mishegul Mtn. quadrangles. All and all I obtain a generalized orientation-knowledge of some of the geologic problems in the west central Brooks and how they might be assisted by regional geophysics. Our joint endeavors should produce some insight on solving some geologic questions as they relate to mineral resources (hard rock and soft rock) land-use planning, regional tectonics. Our field work should produce quite a few new joint (USGS-ADGGS) publications of major significance and interest to the public as well as state-federal government agencies. So much for justification and potential usefulness to the State of Alaska.

6. Joint USGS-ADGGS accomplishments during Aug. 12-31st include the following:

   1. 350 new regional gravity stations were occupied in the Ambler R., and Survey Pass quadrangles
II. 96 rock samples were collected for physical property determinations (rock density and magnetic susceptibility)

III. 18 oriented rock samples were collected for remanent and permanent magnetic susceptibility determination

IV. 4 major N-S regional gravity profiles were completed over the west-central Brooks Range

V. 7 detailed and semi-detailed gravity profiles were conducted over Cretaceous intrusive bodies, mafic and ultramafic complexes within the west-central Brooks Range.

Well so much for thoughts in a tent listening to blowing sleet and snow outside. I hope this up-dates you sufficiently!

Bergheli,

Steve H.
**DIVISION OF GEOLOGICAL AND GEOPHYSICAL SURVEYS**

**Monthly Work Report**

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Totals for Anchorage, Juneau, and Ketchikan are for September 1, 1975 to June 30, 1976 as the College office didn't start keeping totals for these other offices until September 1975.
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DIVISION OF GEOLOGICAL AND GEOPHYSICAL SURVEYS

Monthly Work Report

Month of September 1976

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<th>Fairbanks</th>
<th>Anchorage</th>
<th>Juneau</th>
<th>Ketchikan</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Visitors</td>
<td>121</td>
<td>43</td>
<td>12</td>
<td>26</td>
<td>202</td>
</tr>
<tr>
<td>2. Annual reports</td>
<td>14</td>
<td>3</td>
<td>0</td>
<td>7</td>
<td>24</td>
</tr>
<tr>
<td>3. Miscellaneous papers</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>4. Miscellaneous publications</td>
<td>12</td>
<td>4</td>
<td>6</td>
<td>3</td>
<td>25</td>
</tr>
<tr>
<td>5. Requests for information received by mail</td>
<td>45</td>
<td>3</td>
<td>14</td>
<td>0</td>
<td>62</td>
</tr>
<tr>
<td>6. Requests for information received by phone</td>
<td>9</td>
<td>29</td>
<td>8</td>
<td>14</td>
<td>60</td>
</tr>
<tr>
<td>7. Rock samples</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>8</td>
</tr>
<tr>
<td>8. Bibliographies</td>
<td>0</td>
<td>5</td>
<td>0</td>
<td>0</td>
<td>5</td>
</tr>
<tr>
<td>9. Geologic &amp; Geochem reports</td>
<td>12</td>
<td>22</td>
<td>0</td>
<td>0</td>
<td>34</td>
</tr>
<tr>
<td>10. Information circulars</td>
<td>119</td>
<td>46</td>
<td>20</td>
<td>44</td>
<td>229</td>
</tr>
<tr>
<td>11. Laboratory notes &amp; reports</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>12. Aeromag maps</td>
<td>2</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>14</td>
</tr>
<tr>
<td>13. Special reports</td>
<td>13</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>13</td>
</tr>
<tr>
<td>14. Open file listing</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>15. Letters</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>17. Xeroxing</td>
<td>0</td>
<td>0</td>
<td>30</td>
<td>6</td>
<td>36</td>
</tr>
<tr>
<td>18. Alaska Open-File Reports (complimentary mailing list)</td>
<td>76</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>76</td>
</tr>
<tr>
<td>19.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
MEMORANDUM

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross Schaff
State Geologist

FROM: Henry Potworowski
Minerals Lab Supervisor

DATE: July 27, 1976

FILE NO:

TELEPHONE NO:

SUBJECT: Monthly Report, July 1976

State of Alaska

1. New samples are beginning to come in from the field. We are logging them immediately, but this time no lab numbers are being assigned. The field number used by the geologists is being used throughout as the only sample identification. This should simplify matters and cut down on paperwork. As of this date these are the statistics:

   Bill Lyle 67 samples
   Cle Conwell 3 samples
   Tom Bundtzen 42 samples
   Gil Eakins 4 samples
   Wyatt Gilbert 313 samples
   Total input as of June 26 429 samples

2. The Varian IM-6D Module is back again in repair where it is averaging 75% of our holding time. Apparently this time it cannot be zero'd properly. This is the ninth time that this unit has been sent to the factory for repairs. We are paying freight and the equivalent of many thousands of dollars of lost man hours trying to fix it, take it down, ship it, etc.

3. Nicki Coursey continues on sick LWOP. Have had a telephone conversation with Mildred Zenger as I am becoming increasingly concerned on her ability to continue in her position as geochemical analyst. In my opinion it is not in the best interest of the state to have someone merely occupy a position without actually working, that is to carry her administratively only while all this time we could have someone else hold the job, who could and would work and contribute his share to the community.
MEMORANDUM

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross G. Schaff
   State Geologist

FILE NO:

DATE: August 25, 1976

TELEPHONE NO:

FROM: Henry S. Potworowski
   Lab Supervisor

SUBJECT: Progress report for August 1976

1. The total input of Division samples stands at 749 as of this date. All
   of these will require thorium, uranium, and potassium determinations in
   addition to the usual seven element geochemical analysis.

2. The Varian IM-6D Module (Digital Readout) of our AA unit continues to reside
   at the factory in Palo Alto, California where it has been sent for repairs
   early in July.

3. Nicki Coursey has returned to work as of August 13, 1976 and appears to
   be taking the daily routine of a full day's work quite well so far.

   Mark Wescott, our temporary geological assistant I, who has been helping
   us with the Minerals Library is leaving August 31, 1976 as he is going
   back to school at the University of Alaska.

4. Most laboratory duties of a professional nature have been apportioned
   as follows:

   Nam Veach : X-ray diffraction and mineral identification.
   Don Stein : Elemental analysis by AA and all public samples
   Nicki Coursey : Determination of thorium.
   Greg Douglas : Determination of uranium and sample input supervision.
MEMORANDUM

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross G. Schaff
State Geologist

FROM: Henry Potworowski
Minerals Lab Supervisor

DATE: September 24, 1976
FILE NO: 
TELEPHONE NO: 
SUBJECT: Progress report for September 1976

State of Alaska

1. Total input of Division samples stands now at 861.

2. The Varian IM-6D module of the AA unit has arrived from the factory where it was being repaired for the last 8 weeks. It seems to be operational at last.

3. Tom Trible, former minerals lab supervisor who is now with the Dept. of Environmental Conservation in Juneau, has visited this office briefly in the early part of this month. He was interested in our capability for doing some particulate analysis by X-ray diffraction.

4. Gene Wade, Department Supply Officer from Juneau, arrived here September 20 and for most of the week did the Division's inventory with the help of Don Stein. Sixty one items have been excessed and are now ready for auction or dumping depending on what action will be taken by the state people who will look it over during the last week of September. These items are now stored at the ACS warehouse.

5. The August budget report from Kate Gray balances with my own bookkeeping record and is in good shape.
DIVISION OF GEOLOGICAL AND GEOPHYSICAL SURVEYS

WEEKLY LABORATORY WORK SUMMARY

for the week of 7-1 to 7-16

<table>
<thead>
<tr>
<th>Public Samples</th>
<th>Geochem. Samples</th>
<th>Division* Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>205</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>0</td>
<td>0 (0)**</td>
<td>0 (0)**</td>
</tr>
<tr>
<td>0</td>
<td>3,423 (12,901)**</td>
<td>103 (434)**</td>
</tr>
<tr>
<td>70</td>
<td></td>
<td></td>
</tr>
<tr>
<td>205</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Backlog from last week

Submitted during week

Completed during week

Cumulative completed since January 1

Backlog at end of week

Remarks:

* Division and other samples or special investigations not formally reported.

** Individual determinations, including optical emission spectrography, x-ray diffraction and emission, microscopic work, etc.

Signed [Signature] Date July 16, 1976
**DIVISION OF GEODETICAL AND GEOPHYSICAL SURVEYS**

**WEEKLY LABORATORY WORK SUMMARY**

for the week of **7-19** to **7-30**

<table>
<thead>
<tr>
<th>Public Samples</th>
<th>Geochem. Samples</th>
<th>Division Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Backlog from last week</td>
<td>205</td>
<td></td>
</tr>
<tr>
<td>Submitted during week</td>
<td>147</td>
<td></td>
</tr>
<tr>
<td>Completed during week</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Cumulative completed since January 1</td>
<td>70</td>
<td>3,423</td>
</tr>
</tbody>
</table>

Cumulative completed since January 1:

<table>
<thead>
<tr>
<th></th>
<th>Public Samples</th>
<th>Geochem. Samples</th>
<th>Division Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 1</td>
<td>70</td>
<td>12,901</td>
<td>434</td>
</tr>
<tr>
<td>August 2, 1976, <strong>RECEIVED</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

* Division and other samples or special investigations not formally reported.
** Individual determinations, including optical emission spectrography, x-ray diffraction and emission, microscopic work, etc.

Signed **Mona B. Byrdman**

Date August 2, 1976
DIVISION OF GEOLOGICAL AND GEOPHYSICAL SURVEYS

WEEKLY LABORATORY WORK SUMMARY

for the week of 8-2 to 8-16

<table>
<thead>
<tr>
<th>Public Samples</th>
<th>Geochem. Samples</th>
<th>Division Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td>352</td>
<td>595 (3,535)**</td>
<td>3 (115)**</td>
</tr>
<tr>
<td>0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>4,018 (16,436)**</td>
<td></td>
</tr>
<tr>
<td>71</td>
<td></td>
<td>106 (549)**</td>
</tr>
<tr>
<td>351</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Backlog from last week

Submitted during week

Completed during week

Cumulative completed since January 1

Backlog at end of week

Remarks:

RECEIVED

AUG 17 1976

Div. Of Geological Survey
Anchorage

Signed [Signature] August 17, 1976

* Division and other samples or special investigations not formally reported.
** Individual determinations, including optical emission spectrography, X-ray diffraction and emission, microscopic work, etc.
### Weekly Laboratory Work Summary

**For the week of** 8-17 to 8-31

<table>
<thead>
<tr>
<th></th>
<th>Public Samples</th>
<th>Geochem. Samples</th>
<th>Division Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Backlog from last week</strong></td>
<td>351</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Submitted during week</strong></td>
<td>32</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Completed during week</strong></td>
<td>175</td>
<td>238</td>
<td>4 (6)**</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(300)**</td>
<td></td>
</tr>
<tr>
<td><strong>Cumulative completed since January 1</strong></td>
<td>246</td>
<td>4,256</td>
<td>110</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(16,736)**</td>
<td>(555)**</td>
</tr>
<tr>
<td><strong>Backlog at end of week</strong></td>
<td>208</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Remarks:**

- Division and other samples or special investigations not formally reported.
- Individual determinations, including optical emission spectroscopy, x-ray diffraction and emission, microscopic work, etc.

Signed: [Signature]

August 31, 1976
**Weekly Laboratory Work Summary**

for the week of **9-1** to **9-15**

<table>
<thead>
<tr>
<th>Public Samples</th>
<th>Geochem. Samples</th>
<th>Division Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Backlog from last week</strong></td>
<td>208</td>
<td>0</td>
</tr>
<tr>
<td><strong>Submitted during week</strong></td>
<td>0</td>
<td>275 (275)**</td>
</tr>
<tr>
<td><strong>Completed during week</strong></td>
<td>105</td>
<td>0 (0)**</td>
</tr>
<tr>
<td><strong>Cumulative completed since January 1</strong></td>
<td>4531 (17,011)**</td>
<td>110 (555)**</td>
</tr>
<tr>
<td><strong>Backlog at end of week</strong></td>
<td>351</td>
<td>103</td>
</tr>
</tbody>
</table>

**Remarks:**

- Division and other samples or special investigations not formally reported.
- Individual determinations, including optical emission spectrography, x-ray diffraction and emission, microscopic work, etc.

Signed: [Signature]

September 17, 1976
**DIVISION OF GEOLOGICAL AND GEOPHYSICAL SURVEYS**

**WEEKLY LABORATORY WORK SUMMARY**

for the week of **9-16** to **9-30**

<table>
<thead>
<tr>
<th>Public Samples</th>
<th>Geochem. Samples</th>
<th>Division* Samples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>103</strong></td>
<td><strong>268</strong></td>
<td><strong>16</strong></td>
</tr>
<tr>
<td><strong>172</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>5</strong></td>
<td><strong>268 (280)</strong>**</td>
<td><strong>16 (96)</strong>**</td>
</tr>
<tr>
<td><strong>356</strong></td>
<td><strong>4,799 (17,291)</strong></td>
<td><strong>126 (651)</strong>**</td>
</tr>
<tr>
<td><strong>270</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Backlog from last week**

**Submitted during week**

**Completed during week**

**Cumulative completed since January 1**

**Backlog at end of week**

**Remarks:**

---

* Division and other samples or special investigations not formally reported.
** Individual determinations, including optical emission spectrography, x-ray diffraction and emission, microscopic work, etc.

Signed: [Signature]

* * * October 4, 1976
REGULATION AND INFORMATION
MEMORANDUM

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross Schaff
State Geologist

FROM: Cleland N. Conwell
Mining Engineer

DATE: July 27, 1976

FILE NO:

TELEPHONE NO:

SUBJECT: Monthly Report, July 1976

1. Problem Areas

a. Production statistics from mining operations is a continuing problem. The letter from Al Service outlines the method of collecting information. I have reviewed the computer run sheets on gold production for 1975 and noted that there are several producers whose names are not on the list. We still need better cooperation with the U.S. Bureau of Mines.

b. Although we have been handicapped for secretarial support with Roberta on sick leave, the delays have not been serious. Gil has suggested we investigate occasionally using Mildred Brown.

c. Frank and Ann have inquired about having Ginny assist with cartographic work under Ann's supervision.

2. Consultations

II. Federal

<table>
<thead>
<tr>
<th>Agency</th>
<th>Date</th>
<th>Topic</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>John Mulligan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. M.E.S.A.</td>
<td>7/9</td>
<td>Safety</td>
<td>Better cooperation</td>
</tr>
<tr>
<td>Vern Danielson</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

III. Miscellaneous

<table>
<thead>
<tr>
<th>Agency</th>
<th>Date</th>
<th>Topic</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Placer Miners</td>
<td>6/29</td>
<td>E.P.A.</td>
<td>Bill Murray, an attorney, will represent Placer Miners in a suite against E.P.A.</td>
</tr>
<tr>
<td>Bill Murray</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Fairbanks</td>
<td>6/29</td>
<td>Oil and Coal</td>
<td>Chamber of Commerce will disseminate information on energy resources</td>
</tr>
<tr>
<td>Chamber of Commerce</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. U. of Washington</td>
<td>7/1</td>
<td>Coal, transportation</td>
<td>The U. of Washington has a U.S.B.M. grant to evaluate transporting AK coal to the Pacific NW.</td>
</tr>
</tbody>
</table>
Agency | Date | Topic | Results
--- | --- | --- | ---
4. Stan Weston | 7/6 & 7/7 | Reclamation | Reviewed progress at Usibelli Mine
5. Kaiser Engineers | 7/16 | Coal, transportation | Kaiser has a U.S.B.M. contract to evaluate North Slope coals
George E. Aiken
6. Stewart H. Folk | 7/21 | Coal, Susitna Basin | Examined coal samples and advised on exploration methods

3. Mine Inspections
   a. Usibelli Coal Mine
   b. Premier Coal Mine
   c. Evan Jones Lease

4. Research
   a. Prepared polished sections of Point Hope coals.
   b. Examined outcrops of the Yanert Formation and sampled Yanert Formation coal.
   c. Sampled coal seam in Healy D-1 quadrangle.
   d. Reviewed coal lands in Alaska.
   e. Sampled an uranium prospect.

5. Miscellaneous
   a. Reviewed requests for CPP extensions, and work affidavits for Division of Lands.
   b. Reviewed a proposed change in the mining laws and prepared a memo with Gil.
MEMORANDUM

State of Alaska

DATE: September 1, 1976

FILE NO.

TELEPHONE NO.

SUBJECT: Monthly report - August, 1976

TO: Ross G. Schaff
State Geologist

FROM: Cleland N. Conwell
Mining Engineer

A. Consultations

I. Federal

<table>
<thead>
<tr>
<th>Agency</th>
<th>Date</th>
<th>Topic</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. Geological Survey</td>
<td>8/12</td>
<td>Arctic coals</td>
<td>Discussed the proposed program of the Kaiser Engineers contract to</td>
</tr>
<tr>
<td>(Jim Callahan)</td>
<td></td>
<td></td>
<td>evaluate North Slope coals.</td>
</tr>
<tr>
<td>Highways</td>
<td>8/2</td>
<td>Right-of-way</td>
<td>Agreed to assist the Highway Department and the Department of Law if</td>
</tr>
<tr>
<td>(Sturgis)</td>
<td></td>
<td>on Steese Highway</td>
<td>necessary in negotiating purchase of right-of-way for the new Steese</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Highway.</td>
</tr>
<tr>
<td>Engelhard Minerals</td>
<td>7/28</td>
<td>Ore buying</td>
<td>Introduced Mr. Katz to several potential ore producers in the Fairbanks</td>
</tr>
<tr>
<td>(Shimon Katz)</td>
<td></td>
<td></td>
<td>area.</td>
</tr>
<tr>
<td>Washington Public Power</td>
<td>8/9</td>
<td>Coal and uranium in Alaska</td>
<td>Reviewed coal fields and possible sources of uranium in Alaska.</td>
</tr>
<tr>
<td>Supply Co.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(R.E. Matson)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Portland General</td>
<td>8/17</td>
<td>Coal and uranium potentials</td>
<td>Discussed the coal potential with Ken Weisenburger and obtained</td>
</tr>
<tr>
<td>Electric Co.</td>
<td></td>
<td></td>
<td>information on their current drilling program.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Introduced Ken Weisenburger to Gil Eakins in regard to uranium</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>exploration.</td>
</tr>
</tbody>
</table>

III. Miscellaneous

B. Mine Inspection

1. Usibelli Coal Mine

2. Howard Bayless and Bob Dittman, placer mine; Vern Weaver, placer mine; Ferrell Bruce, lode silver mine; George Robertson, Jack Wade Creek, placer mine; Russell Hammond, placer mine; Paul White, placer mine; Steve Olson, placer mine; Alvin Kyles, placer mine; Strikler, placer mine; Kilk Stanley, stibnite mine.
C. Research

1. From Tuesday, August 3, 1976 through Friday August 6, 1976 canoed down the Yukon River to sample coal and looked for uranium prospects.

2. Investigated the coal resource in the Broad Pass coal field.

3. Reviewed mining activities in the Fortymile area.

D. Reviewed requests for coal prospects and permit extensions for the Division of Lands.

Prepared a short paper on the Point Hope coals for the series of short papers to be published by the Alaska Division of Geological and Geophysical Surveys.
MEMORANDUM

TO: Ross G. Schaff
State Geologist

FROM: Cleland N. Conwell
Mining Engineer

DATE: September 24, 1976

SUBJECT: Monthly Report -
August 25 - September 25

State of Alaska

Problem areas:
None.

Consultations:

<table>
<thead>
<tr>
<th>Federal</th>
<th>Agency</th>
<th>Date</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jim Barker</td>
<td>USBM</td>
<td>9/22/76</td>
<td>Four Bear Mining Company - inspected mine.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>State</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Jim Drew</td>
<td>U. of A.</td>
<td>9/15/76</td>
<td>Need for lime and phosphates in Alaska agriculture.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Other</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Karen Cedzo</td>
<td>KTVF</td>
<td>8/30/76</td>
<td>She requested Info on move of ADGGS to Anchorage. Referred her to you and provide your telephone number.</td>
</tr>
<tr>
<td>Stanley Weston</td>
<td>Westco Agri. Co.</td>
<td>9/8/76</td>
<td>Reviewed progress at Usibelli on mined land reclamation.</td>
</tr>
</tbody>
</table>

Conferences:

9/10/76 - Met with you and Brown, U. of Al., on improving office space (repairs) at Maintenance Building.

9/13/76 - With Paul Dicksen, Jim Price, and Dan Egan on appraisal of Alaska Gold property near Fox for new highway.
Research:

a. Appraisal of mineral potential of Fortymile area.

b. Paper on Alaska Mining for Western Miner - submitted on 9/15/76.

c. Short report on limestone and phosphates for Alaskan agriculture.

d. Metallurgical balance for mill at Fox.

e. Coal.

Mine Inspections:

1. Kirk Stanley near Tok.

2. Usibelli.

3. Two Wolves Mining Company.


5. Joe Taylor mine.

6. Four Bear Mine.

Other:

Reviewed several OPP's and CPP's for Division of Lands.

Reviewed two CPP's conversion to coal leases for Division of Lands.
DIVISION OF GEOLOGICAL SURVEY

MONTHLY CENTRAL RECORDING WORK SUMMARY

For Period Ending July 25, 1976

REMARKS:
Pat Dieterich
Carole Stevenson

The Mining Information section has completed the computer run of the Kardex System. All information has been forwarded to John Baxandall. Hired Mildred Brown to help plot and process the mining claims that have come in from the first of the year. She has processed 2,408 claims and gives us a backlog of 1,410.

Total visitors for the month 174.
Visitors for Publications 30
Total College Office 204

<table>
<thead>
<tr>
<th>Claim Loc. Notices</th>
<th>Affidavits of Labor</th>
<th>Deeds</th>
<th>Misc.</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>Backlog</td>
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<td>146</td>
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<tr>
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<tr>
<td>Backlog</td>
<td>1,079</td>
<td>1,079</td>
<td>172</td>
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<tr>
<td>Cumulative received since Jan. 1</td>
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**ACTIVITY REPORT**

**Mining - Information Section**

Requests answered:

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<tr>
<th>Mail</th>
<th>Telephone</th>
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Distribution:

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<tr>
<th>Information Circulars</th>
<th>Reports</th>
</tr>
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<tr>
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<td>Geologic</td>
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<tr>
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<td>Geochemical</td>
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<tr>
<td></td>
<td>Miscellaneous</td>
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Xeroxing: 1,050 pages

Number of visitors: 14
DIVISION OF GEOLOGICAL SURVEY

MONTHLY CENTRAL RECORDING WORK SUMMARY

For Period Ending August 25, 1976

<table>
<thead>
<tr>
<th>Claim Loc. Notices</th>
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<td>Backlog</td>
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MARKS: Pat Dieterich
Carole Stevenson

Have processed all documents from the Recorder thru July of 76. Processed 1,668 documents this month.

Total visitors for Mining Information 118.
DIVISION OF GEOLOGICAL SURVEY

MONTHLY CENTRAL RECORDING WORK SUMMARY

Period Ending September 25, 1976

<table>
<thead>
<tr>
<th>Claim</th>
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<td>30</td>
<td>326</td>
<td>33</td>
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</table>

Cumulative received since Jan. 1

- 6,258  | 6,258  | 401  | 4,066 | 200  | 1,334 | 8,193 | 10,324 |

Cumulative processed since Jan. 1

- 7,537  | 7,537  | 625  | 8,728 | 263  | 1,364 | 9,789 | 16,265 |

MARKS: Pat Dieterich
        Carole Stevenson

Processed 2,139 documents for the month. Made corrections to the Kardex File off the IBM Computer run. The new Microfiche system is now being checked off the computer sheets. Found the new system to be very useful. Mr. Baxandall came up from Anchorage to discuss the Phase II-III of the new system. The second Microfiche Reader was damaged in shipment.

Visitors - 107

Xeroxing - 395 pages
ACTIVITY REPORT

Mining Information Section

Requests answered:

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Distribution:

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<td></td>
<td>Geochemical</td>
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<tr>
<td></td>
<td>Miscellaneous</td>
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Xeroxing 395 pages

Number of visitors 107