

Public-data File 86-46

DIVISION OF GEOLOGICAL AND GEOPHYSICAL SURVEYS
MONTHLY REPORTS FOR OCTOBER, NOVEMBER, AND DECEMBER 1977

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

Resource Investigations

MEMORANDUM

State of Alaska

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross G. Schaff
State Geologist

DATE: October 26, 1977

FILE NO:

TELEPHONE NO:

FROM: Thomas K. Bundtzen
Mining Geologist

SUBJECT: Monthly report
September 26 thru October 25

Work accomplishments

1. (10/21-25) - Worked on North Flank report with Wyatt Gilbert, drafting sulfur and lead isotope data.
2. (10/16-20) - Completed figures and part of text of report that Bob Forbes and I plan to publish in the J.E.G.
3. (10/5-8) - Sorted, collated rock samples for thin section and major oxide analyses, Bonanza Hills and Kuskokwim areas.
4. (10/10-12) - Drafted up inch-to-the mile geologic map of Bonanza Hills work.
5. (10/11) - Assigned and ordered 1:125,000 scale maps for Kuskokwim geologic map.
6. (10/8) - Moved office furniture (Polish Van & Storage) from Geophysical Institute to the Resource Building.
7. (10/12-14) - Sorted and collated geologic slides from 1977 season.
8. (9/28) - Showed 65 students of North Pole High School the ADGGS offices and laboratory; took them on a field trip in the afternoon.

Correspondence with government agencies

1. (10/3) - Dr. Naidu, Institute of Marine Science, about using -80 mesh fraction of stream sediment samples collected on Kuskokwim project for his clay mineralogy studies. He will use about 25 samples after we analyze for 11 elements.
2. (10/8) - John Dunker, Alaska Division of Lands, about continued geological research in the Delta Planning area.
3. (9/26) - Carl Harmon, U.S. Forest Service, about Tongass Plan. Geology and Minerals Task Force emphasized growing public interest in nonrenewable resources within southeastern Alaska.
4. (10/15) - Mike Churkin, U.S. Geological Survey, about getting his comments on Herreids manuscript back to us as soon as possible.
5. (10/14-16) - Syun Akasofu, Jurgen Klenle, Steven Estes, and Larry Gedney, Geophysical Institute, about a reported piezoelectric phenomenon near Iliamna Volcano. Earthquake generated electrical discharges are known in other parts of the world but not documented here - - - yet.

Correspondence with public

1. (10/7, - 10/14) - William Wagner, independent researcher, about geology of Iliamna Volcano area and reported piezoelectric phenomenon. He gave me sources for his reports which I am in the process of checking. This type of interesting information could possibly be written up in the Mines & Geology Bulletin.

2. (10/20) - Howard Bowman, gold miner in Mulchitna district, about our plans for data we collected on his claims and returning some of his personal gear.
3. (10/3) - Vincent Monzulla, tungsten miner, about his property on Gilmore Dome north of Fairbanks. Mr. Monzulla successfully recovered approximately 2,200 pounds of tungsten concentrate from his small scale mining operation this season.
4. (10/21) - Mr. Matthews, uranium prospector, about prospecting suggestions.

MEMORANDUM

State of Alaska

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross G. Schaff
State Geologist

DATE: December 9, 1977

RECEIVED

FILE NO:

DEC 12 1977

TELEPHONE NO:

Div. of Geological Survey
Anchorage

FROM: Thomas K. Bundtzen
Mining Geologist

TKB

SUBJECT: Monthly report
October 25 thru November 25.

Major accomplishments

- 1) 10/25-11/25 - Wrote economic section of AGS Symposium paper on Alaska Range studies with W. Gilbert including drafting up prospect maps, sulfur and lead isotopic data, and various tables and sketches.
- 2) 11/10-11/14 - Worked on evaluating various township tracts for their mineral potential for the Division of Policy and Planning within DNR. My major emphasis was the Seward Peninsula and Wrangell Mountain tracts.
- 3) 11/15-11/25 - Worked on Geoscience Forum paper (General Geology and Mineral Deposits of Southeast Alaska) to be given at Northern Cordillera Workshop in Whitehorse, Yukon Territory on December 2, 1977. This included extensive literature search and reexamining work done by Eakins, Conwell and myself this spring.
- 4) 11/16 - Reviewed Herreid's manuscript for errors, drafted up plates for Geoscience Forum presentation.

Correspondence with government agencies

- 1) 11/14 - Dave Hansen and Jim Wickes, Planning and Research Section within DNR about mineral potential of certain townships throughout Alaska.
- 2) 11/10 and 11/20 - A.S. Naidu, Institute of Marine Science, about -80 mesh fractions of stream sediments we collected which he will use for clay mineralogy studies.

Correspondence with public

- 1) 11/14 - Howard Bowman, part-time miner and resident of Iliamna, about "Iliamna Lights." He could not confirm any reported sightings from residents of Iliamna.
- 2) 10/28 - Phil Holdsworth, about his planned Haines barite mine and about sightings of piezoelectric lights at Iliamna which he was quoted as a source.
- 3) 11/20 - David Brenner, "Vortex Institute," about agricultural and geothermal potential of Pilgrim Hot Springs, Seward Peninsula, Alaska.
- 4) 11/22 - Jim Fuksa, Kantishna gold miner, about gold prospects within Kantishna mining district.

MEMORANDUM

State of Alaska

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross G. Schaff
State Geologist

DATE: December 23, 1977

FILE NO:

TELEPHONE NO:

FROM: Thomas K. Bundtzen *TKB*
Mining Geologist

SUBJECT: Monthly report
November 25 thru December 23

A. Accomplishments

1. 12/1-12/6 - Attended Northern Cordillera Workshop and Geoscience Forum in Whitehorse; gave a presentation on southeastern Alaska. Upon return wrote up a summary of both.
2. 11/25-12/14 - Worked on final drafts of Alaska Range paper with Wyatt Gilbert; sent the camera ready copy to Alex Sisson of AGS on December 15.
3. 12/17-12/23 - Continued research of Fairbanks-Circle-Kantishna- and Keno Hill districts for future paper with R.B. Forbes.

B. Consultations with government agencies

1. 12/4-12/14 - D.K. Norris, Geological Survey of Canada about coal resources of Yukon Territory.
2. Dick Bell, Ian Johnnason, and Wayne Goodfellow, Geological Survey of Canada about the recent uranium-cobalt discoveries on northern Yukon Territory.
3. Jim Morin (DIAND), Andrei Panteleyeun (B.C. Dept. Mines), A.J. Sinclair (U. British Columbia) and Tom Schroeter (B.C. Dept. Mines) about comparing mineral deposits of southeastern Alaska with British Columbia-Yukon equivalents including the U.S. Borax find and similar Canadian porphyries.

C. Consultations with the public

1. 12/9 - Terry and Victoria Gill, Lake Clark gold miners, about gold fineness and heavy minerals from their placer deposits.
2. 12/14 - David Brenner, "Vortex Institute" about geothermal potential of Pilgrim and Clear Creek Hot Springs.
3. 12/15 - Alex Sisson AGS paper.
4. 12/15 - William Wagner, independent researcher, about earthquake activity at Iliamna. He informed me by phone (12/19) that the Civil Aeronautics Board has taken great interest in his research at Iliamna, Bali (South Pacific) and other earthquake prone localities.
5. 12/19 - Sanford Wise, Mountain Minerals Corp., about barite resources of Alaska.
6. 12/14 - Kerwin Krause, Bendix Corp., about geology and uranium potential of Kantishna area and southern Alaska Range.

MEMORANDUM

State of Alaska

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross G. Schaff
State Geologist

DATE: October 26, 1977

FILE NO:

TELEPHONE NO:

FROM: John Dillon
Mining Geologist

SUBJECT: Monthly report
September 26 thru October 25

A. Consultations

Agency
I. State

Parks Service
(George Smith)

Date

Topic

Results

10/21

Fossils mistakenly
addressed to our
office.

May have been collected
by one of his employees;
he is checking.

II. Federal

USGS
(Dr. George Spicer)

10/4

Fossils mistakenly
addressed to our
office.

He did not collect fossils
but would like to have them
if location is known.

USGS
(Dr. Warren Hamilton)

10/17

Brooks Range
field work for
1978.

He would like to return
and will be able to help
financially with air-
craft charters.

USGS
(Dr. John Cathrall,
Chief, Branch of Ex-
ploration Research)

Rock assays.

Cathrall agreed to assay
220 rock specimens in
addition to the 600 stream
sediment samples that have
been analysed by the USGS
for the DGGG Brooks Range
project this year. De-
tails of computer print-
out and plotting of
samples by USGS were
arranged. Green line
mylars of the Wiseman
quad are being given to
us by USGS.

USGS
(Dr. Thomas Hamilton)

Surficial geology
of the Wiseman
quad.

Obtained a copy of a pre-
liminary compilation of
his surficial geology
map of the Wiseman quad
for use in compilation of
a bedrock geologic map.

B. Conferences - none.

C. Research

1. Completed test of major oxide analysis program to determine accuracy of analyses. Found the analyses to be of high enough quality to be published, although marginally so. Reported results in a memo.
2. Split, described, and prepared 220 rock samples for USGS assay.
3. Began work on zircon separations.
4. Continued working on rocks and maps for Wiseman quadrangle.

MEMORANDUM

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

State of Alaska

TO: Ross G. Schaff
State Geologist

DATE: December 23, 1977

FILE NO:

TELEPHONE NO:

FROM: John Dillon
Mining GeologistSUBJECT: Monthly report
October 25 thru December 23

A. Consultations

<u>Agency</u>	<u>Date</u>
I. State	
1. Lands (W.D. Hanson)	11/14

Discussed input required as an evaluation of mineral resource potential of certain areas of the state. Input by letter and map on 11/17 and 11/21.

2. University of Alaska (T.E. Smith)	
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Several conferences in which we discussed the possibility of having a student work on a Masters Thesis as a part of a DGGS project. This seems to be working out but there is the possibility of conflicts of interest if Tom is on the committee.

II. Federal

1. U.S.G.S. (Bill Silberman)	
2. U.S.G.S. (Bill Silberman)	12/20
3. U.S.G.S. (A.T. Owenshine)	12/21

Several telephone conferences concerning zircon dating program when it became apparent that UCSB wanted more for its services than I had anticipated.

4. U.S.G.S. (Denver) (Dr. Warren Hamilton)	
5. U.S.G.S. (Anchorage) (Don Grybeck)	

Letter and proposal for U.S.G.S. funding of \$4,000 for radiometric dates. Letter and proposal as above. Also requested that he plan to spend some time discussing various problems with the DGGS College office staff during his planned January visit. Letter requesting his voluntary participation in our Brooks Range field program in 1978. Several phone discussions regarding mineral resource data for use in prioritizing state lands. Don relayed data on the belt of lead-zinc deposits.

III. Other

1. U.C. Santa Barbara (Dr. George Tilton)	
2. Student (Jerry Piece)	
3. Crevice Creek (Bill Fickus)	

Letter and telephone conversation regarding zircon dating, mineral separation, and geochemistry. Particulars of the price of U/Pb isotope analysis were discussed. Several conferences with Jerry concerning the possibility of him doing a thesis in the Brooks Range with DGGS support. He is preparing a proposal on a geophysical study which involves Steve Hackett and myself. Visited Bill during Thanksgiving and discussed the fuel barrel problem. In a letter 12/20 I suggested a solution to the problem and asked for information regarding next field seasons use of Crevice Creek.

4. Nenana Fuel
(Accounts Manager)

Several telephone conversations about the fuel barrels at Bill Flickus', future availability of fuel barrels, and logistics of fuel supply for the summer 1978 field seasons.

B. Conferences

Was briefed by Tom Bundtzen and Wyatt Gilbert on the information that came out of the Whitehorse Geoscience Forum and Workshop. Found Tom's summary of December 14 most informative.

C. Research

1. Continued to cut the Brooks Range rocks for thin sections. About 400 rocks are now ready but 600 remain to be cut.
2. Ground eight 30-pound samples to 200 mesh in Don Turners lab. These are the samples for the zircon dates. Approximately one weeks work here.
3. Rebuilt a "Wilfley table" (two weeks) in order to separate heavy minerals including zircons from above samples.
4. Obtained a commitment from Don Grybeck (USGS) that he will prepare any polished sections which I need for Brooks Range project.
5. Through Nam Veach I obtained the analysis of amphiboles in several possible high pressure metabasites from the Brooks Ranges. The amphibole is not glaucophane but may be a high pressure, intermediate temperature amphibole called Barrowite.
6. Completed an evaluation and prioritization of about one hundred townships in the Brooks Range. Results were presented to Dave Hanson in map, table, and narrative form on 11/17 and 11/21.
7. Reduced Nam Veaches work load on mineralogical analysis of pan concentrates by 2/3 by showing that all the heavy minerals of interest are in the final heavy liquid separate and that her analysis of the light minerals was not productive.
8. Assisted a placer gold miner (John Thomas) in developing a method for purifying his placer concentrates to +95% Au.

D. Status of reports and publications.

1. Prepared a short summary of the 1977 Brooks Range field work for fall issue of the Mines Bulletin (500 words).
2. Prepare a 1,500 word discussion of government industry and academic research goals, results, problems, and methods in the Brooks Range including a discussion of the present studies of the DGGs.
3. Reviewed several papers for Wyatt Gilbert and Tom Bundtzen.
4. Completed manuscript for a paper with Gordon Haxel (U.S.G.S.) on the geology of southeastern California.

MEMORANDUM

State of Alaska

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross G. Schaff
State Geologist

DATE: October 26, 1977

FILE NO:

TELEPHONE NO:

FROM: Gilbert R. Eakins *GRE*
Chief Mining Geologist

SUBJECT: Monthly report
September 26 thru October 25

A. Consultations

<u>Agency</u>	<u>Date</u>	<u>Topic</u>
1. Elliott Sellers	10/21	Advice on selecting homesites on state lands.
2. Bendix	9/26	Discussed ERDA contract.
3. Ron Sheardon (Greatland Exploration)	10/11	Discussed U exploration and activities in Seward Peninsula. Also, possibility of using Enstrom Helicopters.
4. Ross Schaff	10/14	Meeting on field programs.

B. Research

Revised ERDA proposal for U analyses.
Discussed computer work for above with Chris Pearson.
Began making industry survey of minerals programs; composed letter and questionnaire.
Selected Lake Clark rocks for thin sectioning and age dating.
Cataloging slides of field photos.
Began to prepare for paper to present at the Northwest Mining Association annual meeting in December.

C. Miscellaneous

Investigated possibility of obtaining additional space for DGGS on U of A campus and off campus. Talked with members of the space committee - Vice Chancellor, Keith Mather; Director of Institute of Marine Science, Rob Moore; Director of Agriculture Sciences, Dr. Drew. Received little encouragement.

MEMORANDUM

State of Alaska

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross G. Schaff
State Geologist

DATE: November 25, 1977

FILE NO:

TELEPHONE NO:

FROM: Gilbert R. Eakins *GRE*
Chief Mining Geologist

SUBJECT: Monthly report
October 25 thru November 25

A. Consultations

Agency	Date	Topic
1. Bendix	10/26	ERDA contract received for U-Th analyses.
2. St. Joe Mining (Dick Walter)	11/1	Activity in Alaska.
3. Elliott Sellers	11/9	Assisted in selecting land in Fairbanks area for development
4. State DOE	11/10	Suggested additions to report on uranium potential in Alaska.
5. Ross Schaff	11/14	Space problem in Fairbanks.
6. Dave Hansen	11/14	Mineral potential of tracts considered for state selections.
7. State Div. Econ. Develop. (Ed Bracken)	11/22	Mineral production in Alaska.
8. Exxon geologist	11/22	U activity in Alaska.

B. Research

1. Conducting a survey of industry's mineral programs, sent out questionnaires.
2. Preparing paper on mineral activity in Alaska for the Northwest Mining Association annual meeting in Spokane.
3. Reviewed geochem data from Lake Clark area.
4. Made mineral potential study of tracts for possible state selections.

C. Meetings

1. AMA Convention in Anchorage October 28-29.
2. AMA Legislative briefing session, Fairbanks - November 23.

MEMORANDUM

State of Alaska

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross G. Schaff
State Geologist

DATE: October 26, 1977

FILE NO:

TELEPHONE NO:

FROM: Wyatt G. Gilbert
Mining Geologist

SUBJECT: Monthly report
September 26 thru October 25

A. Consultations

I. Federal

<u>Agency</u>	<u>Date</u>	<u>Topic</u>	<u>Results</u>
1. USGS (D. Grybeck)	10/25	Discussed co-ordination of Alaska Mineral Association talks.	
2. Office of Tech. Asses. (Frank Wouber)	10/18	Access to minerals on non-federal lands	The workshop covered environmental problems. I participated during the first day and helped eliminate several misconceptions about mineral development of State and Federal Surveys.

II. Other

1. C. Hawley (AMA)	10/6	Participation in AMA Convention.	Discussed the subject of AMA paper.
2. T. Smith	10/19	Discussed new exploration developments in south Brooks Range.	

B. Research

I. Accomplishments

1. Began analyses of geochemistry of north-central Alaska Range.
2. Selected specimens for K/Ar dating.
3. Began revision of AGS Alaska Range paper.

C. Status of reports and publications

1. Prepared a paper to be given at AMA annual meeting, based on GSC paper.
2. Reviewed a manuscript on Alaskan blueschist belts by J. Carden.

D. Miscellaneous

1. Met with State Geologist - 10/14.

MEMORANDUM

State of Alaska

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross G. Schaff
State Geologist

DATE: December 1, 1977

RECEIVED

FILE NO:

DEC 8 1977

TELEPHONE NO:

Div. Of Geological Survey
Anchorage

FROM: W.G. Gilbert
Mining Geologist

SUBJECT: Monthly report
Period October 25 thru November 25

A. Consultations

I. State

Agency	Date	Topic
1. State legislators	11/23	Met with Fairbanks State Legislators and discussed problems of mining in Alaska. Sponsored by Alaska Miners Association.
2. DMEM	11/14	Discussed mineral potential of possible state selections W.D. Hanson and R.G. Schaff. Prepared information on Alaska Range for DMEM.

II. Federal - none

III. Other

1. Dept. Anthropology (U of A) (John Hoffeecker)	11/21	Discussed geology of Dry Creek early man site and of its stone artifacts.
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B. Conference

C. Research

1. Revised and nearly completed manuscript on "Mid-Paleozoic tectonics, volcanism, and mineralization in north-central Alaska Range" for AGS Symposium.

D. Status of reports & publications

1. Presented a paper on "Comparative stratigraphy of southern Brooks Range and Alaska Range sulfide belts" at Alaska Miners Association Convention - - 10/28

E. Miscellaneous

1. Prepared to attend a workshop on mineral deposits in the northern Cordillera at Whitehorse December 2-4.

STATE
of ALASKA

MEMORANDUM

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: ☐

Ross G. Schaff
State Geologist

DATE: October 27, 1977

FILE NO:

TELEPHONE NO:

FROM:

Steve Hackett
Geophysicist

SUBJECT: Monthly Report for
October, 1977

A. Consultations

<u>Agency</u>	<u>Date</u>	<u>Topic</u>	<u>Results</u>
1. USGS (Grybeck)	10/5	Survey Pass Quadrangle	Summarized 1977 field season, discuss tentative plans for 1978
2. Div. of Parks (Robenawick)	10/6	Avalanches	Discussed Avalanche Hazard Project for Seward Highway and Chugach State Park. Obtained information on available airphoto coverage
3. ADGGS (Schaff, College staff)	10/14	Minerals Project Review	Outlined current plans and tentative products
4. NASA-USGS (Boars)	10/17	Basement Tectonics	Received invitation to participate in 3rd International Conference on Basement Tectonics
5. ADGGS (Schaff, Anchorage staff)	10/19	Petroleum Project Review	Outlined current endeavors, future projects and potential products
6. Consultant (Canada)	10/20	Mineral Exploration Uranium	Summarized orientation survey in Selawik Lowlands; referenced John Gady, USGS, Federal Center, Denver
7. Department of Administration (Bob Link)	10/26	Aeromagnetic Contract	Provided technical information for contract bid announcement
8. ADGGS (Potworowski)	10/27	Geophysical Lab Expansion	Status of potential contract between Univ. of Alaska and ADGGS Lab

B. Research

1. Alaska Peninsula geophysical:

- continue reducing 1977 field data
- processing 1974 gravity data
- need to integrate geologic (surface and subsurface) data, help needed from Bill Lyle

2. Brooks Range geophysical:

- continue reducing 1977 field data
- monitoring aeromagnetic contract thru Dept. of Administration
- running base station net for Brooks Range gravity data
- awaiting tabulated SBA values from Barnes, 1975-76 data Ambler River quadrangle

3. Talkeetna-Kashwitna-Susitna geophysical:

- Simple Bouguer map and tabulated data ready to open-file, currently being reviewed by F. Larson

4. North Flank Alaska Range geophysical:

- SBA map completed for Healy quadrangle, integrating geology with W. Gilbert
- need to reduce 1977 field data, Tonsona River area
- continue processing ground magnetic data (Purkey-Pile project)

5. Geologic Hazards (avalanche):

- continue literature review
- need to index available airphoto coverage (pre-1964 thru 1977)
- need to obtain 1:24,000 scale base maps (Chugach State Park and Seward Highway)
- streamlining project goals and priorities
- outlining text for Geologic Hazards report (avalanches)

6. Geophysical Computer Project:

- continue working with Mike Lee, computer analyst DOGC
- need to study Fortran IV programming, and get programs and sub-routines adapted to University of Alaska (Anchorage Node)

7. Physical Rock Properties Lab:

- continue discussions between ADGGS Lab and Geophysical Institute, Solid Earth Science Department (potential contract)
- need to process 1976 and 1977 rock samples (Brooks Range project areas)

C. Publications (Status of Reports):

1. Geologic Report 58 (Geology of Ruby Ridge), in press
2. Aeromag Interpretation Ambler River Quadrangle, formal review
3. OFR 107H Talkeetna-Kashwitna Simple Bouguer Gravity Map, needs to be reviewed by Frank and final drafting by Charlotte
4. OFR 107I Talkeetna-Kashwitna Aeromagnetic Map, needs final drafting by Charlotte

D. Miscellaneous:

1. Scheduled to attend the 5th National Avalanche Seminar in Reno, Nevada, October 31 - November 5
2. Need to expand background in computer programming to assist in getting geophysical modelling and reduction subroutines in useable form

STATE
of ALASKA**MEMORANDUM**DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYSTO: ☐Ross G. Schaff *RG*
State Geologist

DATE:

December 6, 1977

FILE NO.

TELEPHONE NO.

FROM:

Steve Hackett *SH*
Geophysicist

SUBJECT:

Monthly Report:
November, 1977

A. Consultations

<u>Agency</u>	<u>Date</u>	<u>Topic</u>	<u>Results</u>
DNR (M. Lee)	11/15	Computer	assistance received in adapting geophysical programs to State system.
Dept. of Admin. (Bob Link)	11/18	Aeromag. contract	still working on contract and legal format.
USGS (C. Mayfield)	11/22	Ambler River AMRAP	tentative deadlines for review and final maps.
Dept. of Admin. (B. Jackson)	11/28	Aeromag. contract	inquired about reasons for delay in processing contract.
U.S. Bureau of Mines (U. Jansons)	11/29	W. Brooks Range	reviewed and discussed mineralization in Paleozoic rocks (schists and ultramafics).
ADGGS (Potowrowski)	11/29	Geophys. Lab expansion	inquired about status of potential contract between Univ. of Alaska and ADGGS Lab (Potworowski and Stone haven't had a meeting yet).

B. Research

1. Alaska Peninsula:
 - continue reducing 1977 data
 - re-processing 1974 data
2. Brooks Range geophysical:
 - continue reducing 1977 data from Wiseman quadrangle
 - waiting on Dept. of Administration to get aeromagnetic contract out for bid
 - need to package up and ship 1976, 1977 rock samples outside for analysis

3. Talkeetna-Kashwitna-Susitna geophysical:
 - open-filing simple Bouguer gravity and aeromagnetic maps, awaiting on final drafting
4. N. Flank Alaska Range geophysical
 - need to integrate geology and geophysical data for report outline
 - need to reduce 1977 field data, Tonsona R. area
 - continue processing and modelling ground magnetic data (Purkey-Pile project)
5. Geologic Hazards (avalanches):
 - attended 5th Annual Avalanche School in Reno Nevada October 31-November 5 (report summary sent to you November 15).
 - outlining text for Geologic Hazards report (Avalanche section)
 - continue reviewing and compiling avalanche info
6. Computer projects:
 - need to expand Fortran IV programming abilities and get modelling subroutines adapted to Univ. of Alaska (Anch Node)
 - Contour program in workable form but needs refinement
 - continue working with Mike Lee, computer analyst
7. Physical Rock properties lab:
 - awaiting on meeting between H. Potworowski and D. Stone (preliminary contract agreement)
 - need to package and ship 1976 and 1977 rock samples (Brooks Range projects) for geophysical analysis.

C. Publications

1. Geologic Report 58 (Geology of Ruby Ridge) in press
2. Aeromag interp of Ambler River Quadrangle, formal review in Menlo Park
3. OFR 107G, H (Talkeetna-Kashwitna-Susitna geophysical maps), final drafting by Charlotte is needed
4. Geologic Hazards (Avalanches), working on format and outline

D. Miscellaneous

1. Will need to spend 2 days this month working in the College office and lab (processing 1976, 1977 Brooks Range rock samples).
2. Need computer programming assistance in getting geophysical modelling and reduction subroutines in useable form.
3. Would like to attend and participate in an Advanced Snow Physics Symposium that is scheduled to be held in Silverton, Colorado, February 3-5, 1978.
4. Anticipate the need* to spend 4-6 weeks working out of the College office in March and April 1978:
 1. need to work on a day-to-day basis with John Dillon, Brooks Range projects and Wyatt Gilbert and Cle Conwell, N. Flank Alaska Range projects.
 2. Need to use Geophysical Institutes digitizer and the U. of A. computer in modelling 1976 and 1977 geophysical data.

*Day-to-day interfacing with ADGGS geologists and editor as well as direct accessibility to computer facilities will assist in integrating-synthesizing geology and geophysics while finalizing data for publications.

STATE
of ALASKA**MEMORANDUM**
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYSTO: ☐Ross G. Schaff
State Geologist

DATE: January 23, 1978

FILE NO:

TELEPHONE NO:

FROM:

Steve Hackett
Exploration GeophysicistSUBJECT: Monthly Report:
December 1977

A. Consultations

<u>Agency</u>	<u>Date</u>	<u>Topic</u>	<u>Results</u>
Dept. of Admin. (Bob Link)	12/5	Aeromagnetic Contract	Bld announcement out, open Jan 3rd.
Div. of Data Processing (Dick Jablonski)	12/5	Inquiry about computer programming assistance	Long range planning and goals
ADGGS (Potworowski)	12/12	Geophysical lab	Summary of meetings to follow (outlining contract between ADGGS and U of A-F (Solid Earth Science Dept.)
ADGGS (Dillon)	12/13	Brooks Range	1978 field plans; sample locations 1977 data
Div. of Parks (Fesler)	12/22	Avalanche study	Activity data for ADGGS Geologic Hazards Report

B. Research

1. Alaska Peninsula geophysical:

- trying to re-process 1974 gravity data and intergrate with 1977 data
- reviewing maps, data and reports on Bristol Bay geology

2. Brooks Range geophysical:

- inventoried, split and shipped 70 rock samples for rock property analysis
- followed Aeromagnetic bid through Dept. of Administration for processing (open bids on January 3rd)

3. Talkeetna-Kashwitna-Susitna geophysical:

- waiting on drafting by Charlotte... AOF #107G & 107H has been ready for open-filing since October 17th

4. N. Flank Alaska Range geophysical:

- preliminary processing of ground magnetic data (Purkey-Pile project) completed
- need to reduce 1977 field data (Tonsona River area)
- need to integrate geology and geophysical data in Healy quadrangle

5. Geologic Hazards (avalanches):

- finished outline for avalanche section of report
- collecting statistical data and photos on Alaskan avalanches
- attended Phase II of Avalanche School January 3 - 6th (Mt. Alyeska and Chugach State Park were the field study sites)

6. Computer Projects:

- studying and expanding computer programing capabilities (Fortran IV and Librarian)
- John Baxandall will be helping to survey ADGGS computer needs, goals and initiate long range planning.

7. Physical Rock Properties lab:

- reviewing contract outling between ADGGS and UAF (Solid Earth Science Dept)
- need to analyse approximately 200 rock samples collected in 1975, 76 and 77.

C. Publications:

1. Geologic Report 58 (Geology of Ruby Ridge) -- authors had hoped that this report would be out by 1978 --- still in press.
2. Aeromag Interp. of Ambler River Quadrangle --- anticipate the returning of this report from Menlo Park review --- final copy will need to be drafted
3. AOF 107G and 107H (Talkeetna-Kashwitna-Susitna geophysical maps) --- awaiting on final drafting by Charlotte.

STATE
of ALASKA

MEMORANDUM

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: ☐

Ross G. Schaff
State Geologist

DATE:

November 10, 1977

FILE NO.

TELEPHONE NO.

FROM:

Mark Howland
Geologist I



SUBJECT

Monthly Report: September 25
to October 25, 1977

A. Consultations and Meetings

1. Discussed Prudhoe Bay project with Brent Petrie, DNR (10-7-77).
2. Meeting with USGS, Water Resources Division, on DGGs-USGS Interactions (10-12-77).

B. Status of Reports and Publications

1. North Kenai cooperative Open-File: Still in USGS review in Menlo Park.
2. Prudhoe Bay report: Sent plates to Randy Updike. Still awaiting text from him.
3. Wasilla Hydrologic Quadrangle: Planned general content. Received computer print-out of groundwater data from the USGS.

C. Research

1. Continued ground-water modeling of North Kenai area with USGS. At present we are calibrating a two-dimensional USGS computer model to historical (transient) water-table data.

STATE
of ALASKA

MEMORANDUM

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: ☐

Ross G. Schaff *RG*
State Geologist

DATE:

December 5, 1977

FILE NO:

TELEPHONE NO:

FROM:

Mark D. Howland *MDH*
Geologist I

SUBJECT:

Monthly Report: Oct. 25
to Nov. 25, 1977

A. Consultations and Meetings

1. Discussed Wasilla Hydrologic Quadrangle report with Beverly Confrancesco, Planning and Research, DNR (10-28-77).
2. Meeting headed by soil conservation service about Susitna River Basin study proposal (11-7-77).
3. Discussed Prudhoe Bay project (surficial map and text) with Jim Kross, Environmental Services, Ltd. (11-15-77).
4. Discussed Prudhoe Bay report with Randy Updike (author) on 11-16-77.

B. Status of Reports and Publications

1. North Kenai cooperative open-file report: reviewed by USGS's Menlo Park regional office. Report must be modified to meet USGS standards.
2. Prudhoe Bay report: received text from Randy Updike. I am merging his text (surficial geology, etc.) and my text (hydrology). Sent copy to Dick Rager for review. Sediment sample are being mechanically analyzed.
3. Wasilla Hydrologic Quadrangle: plan to plot ground-water data from USGS computer print-outs on 1:24,000 USGS topo maps.

C. Research

1. Continued gravel-water modeling of North Kenai area with USGS. Our model is running; still some bugs, though. First major step is to calibrate the model with historical water level data.

STATE
of ALASKA

MEMORANDUM
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: [

Ross G. Schaff *RL*
State Geologist

DATE February 1, 1978

FILE NO.

TELEPHONE NO.

FROM:

Mark Howland *just*
Geologist I

SUBJECT: Monthly Report
November 25 - December 25, 1977

A. Consultations and Meetings

1. Discussed status of North Kenai hydrologic monitoring with Brent Petrie, Planning and Research, DNR (11-28-77).
2. Meeting with Brent Petrie (Planning and Research, DNR), Ross Schaff and Bill Long on coordination of state agencies involved with water resource activities (11-29-77).

B. Status of Reports and Publications

1. North Kenai cooperation open-file: Report modified by co-author, Jeff Freethey, USGS. Awaiting USGS approval.
2. Prudhoe Bay report: Sediment samples analyzed. Rewrote hydrology. Finishing off details.

C. Research

1. Calibrating ground-water model with North Kenai data. Trying to get out frogs.

D. Miscellaneous

1. On leave 12-12 to 12-30.

STATE
of ALASKA**MEMORANDUM**DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYSTO: ☐Ross G. Schaff *265*
State Geologist

DATE:

December 8, 1977

FILE NO:

TELEPHONE NO.

FROM:

William M. Lyle
Petroleum Geologist
W. M. Lyle

SUBJECT:

Monthly Report:
November, 1977

Kodiak Report

This report has gone through final editing and we are waiting on the nomenclature committee. The blue line work will start as soon as we get an okay on the nomenclature.

Alaska Peninsula Report

Most of the drafting has been completed on the 1974 and 1977 data we are trying for a June open-file.

D-2

P+R
We have jointly worked on the data base for ~~DMEH~~ computer program (oil, minerals, etc.).

Norton Sound

A joint USGS-State of Alaska geological and geophysical project has tentatively been approved.

Inquiries

- P+R*
1. Four meetings with ~~DMEH~~ regarding D-2 input.
 2. Fish & Game overlap regarding D-2 input.
 3. Felton Construction (11-27-77) inquired about light weight aggregate.
 4. Five meetings with USGS regarding routine plans to complete present two projects and logistics for 1978.

la
STATE
of ALASKA

MEMORANDUM

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: ☐

Ross G. Schaff *RG*
State Geologist

DATE:

December 8, 1977

FILE NO.

TELEPHONE NO.

FROM:

Don L. McGee *DLm/plc*
Petroleum Geologist

SUBJECT:

Monthly Report:
November, 1977

A. Consultations

1. Discussed the coal potential of the Herendeen, Chignik areas with Bruce Cambell.
2. Discussed with Charles Kirschener USGS Open File 77-524.
3. Consulted with A. Wynne, a consultant from Littleton, Colorado, the State will be receiving copies of core hole logs near Homer which can be incorporated into the regional coal resource picture.

B. Conference

None

C. Accomplishments

1. Completed an analysis of the Lower Cook Inlet lease sale in conjunction with Bill Lyle.
2. Completed a coal resource analysis for Gorwin Bluffs area and Herendeen, Chignik Bay areas of the Alaska Peninsula for the Planning group.

D. Status of Reports and Publications

1. The bedrock geology of the Talkeetna-Willow area. Map is being drafted and text is essentially ready to go. Part of OFR 107 (E).
2. Coal Resources-Herendeen area. Rough maps have been drawn and text is being written.
3. Coal Resources-Chignik Bay area. Rough maps are being compiled and text is being written.

E. Miscellaneous

1. Reviewed D. Lanes' Energy Report.
2. Reviewed "Technical and Economic Feasibility Surface Mining Coal Deposits North Slope of Alaska, A report prepared for the United States department of the Interior Bureau of Mines by Kaiser Engineers, Inc.
3. Reviewed Alaska OFR 114.
4. Sent a brief summary of the Willow Creek volcanics to Dick Reger.
5. Briefly reviewed a coal Research Bulletin by the ERDA group.

MEMORANDUM

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

State of Alaska

TO: Ross G. Schaff
State Geologist

DATE: November 25, 1977

FILE NO:

TELEPHONE NO:

FROM: Richard D. Reger *RDR*
GeologistSUBJECT: Monthly report
September 24 thru November 25

A. I was involved in the following consultations during the period September 24 thru November 25, 1977:

1. (9/26) - Discussed status of geologic mapping of new Capital site with Lynn Schraeder (R and M Consultants, Inc.).
2. (9/26) - Discussed status of geologic mapping of new Capital site with Ray Kreig (R.A. Kreig and Associates, Inc.).
3. (9/29) - Talked with Ray Kreig (private consultant working for NW Pipeline Co.) about available data for Livengood quadrangle.
4. (9/30) - Talked with Tom Dowell, consultant to Capital Site Planning Commission, about status of geologic mapping in the Capital site area.
5. (10/4) - Talked with Didi Wilcox (USGS) about surficial geology of Delta Junction area.
6. (10/7) - Discussed problem of siltation of Minto Flats as a result of Livengood placer mining with Ernie Wolff (UAF--MIRL).
7. (10/10) - Discussed surficial mapping program of Ken Dean, UAF geology student (Summit Lake and Valdez Creek areas).
8. (10/11) - Justified critique of hazards report of Mt. Wrangell area with Carl Benson and Roman Motyka (UAF Geophysical Institute).
9. (10/14) - Discussed progress of Fairbanks geologic hazards report with T.L. Pawe (Arizona State University).
10. (11/15) - Discussed status of surficial geology in the northern part of Seward Peninsula with Richard Stern (Arctic Institute of Biology).

B. I conducted research on the following projects during the period September 24 thru November 25, 1977.

1. Mapping surficial geology of southern Kenai Peninsula.
2. Slushflow avalanches in the central Brooks Range.
3. Mapping surficial geology of new Capital site.

C. Status of reports and publications.

1. AOF-111A, Photointerpretive map of the surficial geology of the southern Kenai lowlands, Alaska, by R.D. Reger completed and distributed.
2. AOF-111B, Photointerpretive map of the geologic materials of the southern Kenai lowlands, Alaska, by R.D. Reger and C.L. Carver completed and distributed.
3. AOF-111C, Slope map of the southern Kenai lowlands, Alaska, by J.T. Kline completed and distributed.
4. AOF-107A, B, and C on Talkeetna-Kashwitna area are being drafted for release by the end of January 1978.
5. Most of photointerpretation of surficial geology of the new Capital site has been completed. Anticipated completion date for AOF-114, Reconnaissance

geology of the new Capital site, Anchorage quadrangle, Alaska, is
December 15.

D. Miscellaneous

1. (10/15) - Lectured on glacial geology to Physical Geology class (UAF).
2. (10/18) - Lectured on surficial geology of Alaska to Geology of Alaska class (UAF).
3. On vacation (10/21 thru 10/28).
4. Attended U.S. Forest Service National Avalanche School at Reno, Nevada (10/31-11/4).
5. Reviewed report on plan for Birch Hill Park, Fairbanks area, by Leonard Johnson (UAF School of Agriculture and Resources Management).
6. Jeff spent about one week this past month setting up a computerized statistical analysis for the geochemical survey of the north flank of the central Alaska Range by Wyatt Gilbert. He also assisted John Dillon in crushing rocks for zircon extraction and has finished mapping the surficial geology of two of four 15-minute quadrangles in the Lake Clark area.
7. Cheri Carver has been busy drafting AOF-111A and AOF-111B and is now working on AOF-107A and AOF-107B.
8. Both Jeff and Cheri have moved their offices and are now ready to proceed with their mapping.

MEMORANDUM

State of Alaska

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross G. Schaff
State Geologist

DATE: December 23, 1977

FILE NO:

TELEPHONE NO:

FROM: Richard D. Reger *RDR*
Geologist

SUBJECT: Monthly report
November 26 thru December 23

A. I was involved in the following consultations during the period November 26 through December 23, 1977.

1. (11/28) - Discussed status of mapping in Big Delta and Mt. Hayes quadrangles with Florence Weber (USGS).
2. (11/30) - Discussed status of mapping surficial geology on north flank of Alaska Range with Roger Powers (UAF).
3. (12/6) - Discussed sources of remote imagery and aerial photography in Alaska with Sp-4 Nugent (Image Interpretation Section, 172nd MIDAS, 222nd Aviation Bn, Fort Wainwright).
4. (12/20) - Talk with Dave Carter (USGS) re surficial geology of upper Tanana River Valley and North Slope.

B. I conducted research on the following projects during the period November 26 thru December 23, 1977.

1. Mapping surficial geology of new Capital site.
2. Preparation of landform atlas with R. Kreig.

C. Status of reports and publications.

1. AOF-107A - Reconnaissance geology of the Talkeetna-Kashwitna area, Susitna River basin, Alaska by R.D. Reger, is in the final drafting stage and will be released by late January 1978.
2. AOF-107B - Reconnaissance map of the geologic materials in the Talkeetna-Kashwitna area, Susitna River basin, Alaska by R.D. Reger and C.L. Carver is being drafted and should be released by late January 1978.
3. AOF-107C - Slope map of the Talkeetna-Kashwitna area, Susitna River basin, Alaska by J.T. Kline is being drafted and should be released by late January 1978.
4. AOF-114 - Reconnaissance geology of the new Capital site and vicinity, Anchorage quadrangle, Alaska by R.D. Reger is still in preparation. The photo-interpretation is nearly completed and the geology is half plotted on 1:63,360-scale maps. After completion of the plotting, another map must be made at a scale of 1:24,000. Release in late January is anticipated.
5. Beginning preliminary editing of landform atlas of TAPS corridor and vicinity by R.A. Kreig and R.D. Reger.

D. Miscellaneous.

1. (12/1) - Lectured on techniques of past and modern snowline evaluations to Glaciology class (UAF).
2. (12/6) - Lectured on processes of glacial erosion and deposition to Glaciology class (UAF).
3. Reviewed preliminary draft of report by R.G. Updike and M. Howland on surficial geology and hydrology of the Prudhoe Bay field, Alaska.

Ross G. Schaff

- 2 -

December 23, 1977

4. Jeff Kline continues to map the surficial geology in the Lake Clark area,
5. Cheri Carver has been busy drafting AOF-107A and AOF-107B.

STATE
of ALASKA*MEMORANDUM*DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS*mole*TO: ☐Ross G. Schaff *RGS*
State Geologist

DATE:

March 23, 1978

FILE NO.

TELEPHONE NO.

FROM: Jim Riehle *JRR*
Geological Engineer

SUBJECT:

Monthly Report: October 1977

A. Consultations

1. Federal: USGS Water Resources Division (requested and discussed data on availability of water well logs in Cordova area).
2. State: DNR Planners (discussed locations of known or potential areas of coastal erosion, SE shoreline of Kachemak Bay).

B. Conferences - None

C. Research

1. Began writing text of report, "Geology and Geologic Constraints of the Coastal Zone from Valdez Arm to Yakutat Bay, Alaska" (required product of CZM Grant, for Office of Coastal Management).
2. Continued final compilation of surficial geology map of eastern Prince William Sound.
3. Went to Bird Point to collect data on setting of debris flows which closed Seward Highway in Oct. of 1977, as well as older flows.
4. K. Emmel and I are trying to collect all available land survey data for areas in the coastal zone of the Kenai lowlands. Large scale surveys will measure distance from a permanent B.M. to the mean water level, hence, a precise determination of shoreline erosion or progradation can be had from 2 surveys at different times. Immediate objective is determination of shoreline erosion rates along the soft seacliffs of the lowlands, both for purposes of quantification and as a general hazards notice to the public.

D. Reports

1. Completed report on Areas of State concern for Geologic Reasons in Alaska's Coastal Zone, with S. Finley (required product for Office of Coastal Management, under CZM Grant).

STATE
of ALASKA

MEMORANDUM

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: ☐

Ross G. Schaff *RS*
State Geologist

DATE:

March 24, 1978

FILE NO:

TELEPHONE NO:

FROM:

Jim Riehle *JR*
Geological Engineer

SUBJECT:

Monthly Report: November 1977

A. Consultations

1. Federal: Glen Greeley, Corps of Engineers (discussed locations of armor riprap sites for Cordova harbor).
2. State: Gene Harp, Dept. Transportation (requested mechanical analyses of Bird Point debris flows; discussed frequency and nature of such flows along Seward Highway).

B. Conferences

1. K. Emmel, S. Finley and I attended the EPA/NOAA oil spill workshop in Anchorage (Nov. 28-30, 1977).

C. Research

1. Completed rough draft of Valdez Arm to Yakutat report; began rewriting.
2. Completed final compilation of surficial geology map, eastern Prince William Sound.
3. S. Finley and I completed some rough research on debris flows and associated hazards.
4. Infrequent work on Kenai lowlands beach erosion rate study.

STATE
of ALASKA

MEMORANDUM

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross G. Schaff *RS*
State Geologist

DATE March 24, 1978

FILE NO.

TELEPHONE NO.

FROM:

Jim Riehle *JRR*
Geological Engineer

SUBJECT

Monthly Report: December 1977

A. Consultations

1. Federal: Bruce Molnia, U.S.G.S. (discussed his critique and suggestions for improvement of the Valdez Arm to Yakutat coastal report). Corps of Engineers (a lieutenant called, requesting information on available surficial publications and reports for Anchorage area).
2. State: Several requests from Planners for information on surficial geology in Cook Inlet, Kenai Peninsula, Prince William Sound, etc., I passed most on to D. Reger.

B. Conferences - None

C. Research

1. Completed rewrite of report, Valdez Arm to Yakutat coastal geology.
2. Completed in-house report with S. Finley on debris flows across Seward Highway. Factors contributing in failure are tentatively identified as lack of deeply rooted vegetation, presence of small steep banks on slopes otherwise flatter than likely critical angle, and possible enhanced groundwater recharge through older hillside roadbed above the failures. Immediate triggering agent was likely to have been high precipitation rates prior to the times of failure.
3. Completed a small research project on timing, nature, and causes of seawaves at numerous localities after the great 1964 earthquake. Results will be included in the Geologic Hazards series, Marine Geology Hazards.
4. Began analysis of different generation of nautical survey boat sheets, in Kachemak Bay, to attempt delineation of potential submarine landslide areas.
5. Completed analysis of available large-scale surveys in coastal zone of Kenai lowlands (beach erosion rates).

Publications

MEMORANDUM

State of Alaska

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross G. Schaff
State Geologist

DATE: October 26, 1977

FILE NO:

TELEPHONE NO:

FROM: Frank Larson *RL*
Publications Specialist

SUBJECT: Monthly report
September 26 thru October 25

Progress for October 1977 includes the following.

EDITORIAL

- Completed paste-up of Geologic Report 55, "Short notes - 1977" and sent to printer.
- Revised Information Circular 18, "Amateur gold prospecting in Alaska."
- Sent out press releases for Geologic Report 46, "Geology of Eureka Creek area, central Alaska Range" (Stout).
- Conducted final editorial conference on Special Report 8, "Chignik Coals" (Conwell, Triplehorn).
- Released Geologic Report 58, "Geology of Ruby Ridge" (Gilbert and others) for typesetting.
- Ditto Geologic Report 59, "Mount Galen Volcanics" (Gilbert and Decker).
- Attended 10th Annual Earth Science Editors Conference, Columbus, Ohio.
- Annual leave.

TYPING

- Made final corrections to Geologic Report 55.
- Ditto Energy Resource map.
- Typed Information Circular 18.
- Typed talk for W. Gilbert.
- Completed Geologic Report 59 on composer (Gilbert and others).
- Typed few miscellaneous articles for new Mines Bulletin.
- Typed various memos and letters.
- Miscellaneous errands and xeroxing.

CARTOGRAPHY (College)

- Finished compilation of Energy Resource map data.
- Completed all six (6) overlays, proofed and reproofed, had proofs run of map and am doing a final check before going to printers.
- Drafted color for D. Reger's slides.
- Drafted figure for T. Bundtzen.
- Performed miscellaneous linework and errands.

MEMORANDUM

State of Alaska


DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross G. Schaff
State Geologist

DATE: November 23, 1977

FILE NO:

TELEPHONE NO:

FROM: Frank Larson 
Publications Specialist

SUBJECT: Monthly report

Progress for November 1977 included the following.

Editorial

Released geologic report 46, "Eureka Creek," by J. Stout, to public.
Released Satellite Map to public.
Completed Energy Resource Map and sent to printer.
Started Mines & Geology Bulletin.
Pasted up most of geologic report 58, "Geology of Ruby Ridge," by Gilbert and Wiltse.
Was conscripted into PV & S crew for 3 days for moving library and condensing office space.

Typing

Typeset geologic report 58.
Began typesetting Mines Bulletin.
Typeset material for slides for Conwell, Bundtzen, and Eakins.
Typed rough drafts for Gilbert and Bundtzen AGS article.
Typed rough drafts for Mines Bulletin.
Typed numerous letters and memos.

Cartography (College)

Completed Energy Resource Map.
Made slides for Conwell, Bundtzen, and Eakins talks.
Worked on AOFs 111A and 111B, "Kenai Peninsula," for Reger, Carver.
Organized negative files for future projects.
Prepared base map for geologic report 48, "Craig A-2," by G. Herreid and Bundtzen.

MEMORANDUM

State of Alaska


DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross G. Schaff
State Geologist

DATE: December 23, 1977

FILE NO:

TELEPHONE NO:

FROM: Frank Larson 
Publications Specialist

SUBJECT: Monthly progress

Progress for the month of December 1977 includes the following.

EDITORIAL

- Mines & Geology Bulletin effort.
- Began compiling input for annual report.
- Completed pasteup of Geologic Report 58, "Ruby Ridge," by Gilbert and others.
- Pasted up article for Alaska Geological Society Symposium volume, "Mid-Paleozoic tectonics, volcanism, and mineralization in the north-central Alaska Range," by Gilbert and Bundtzen.
- Wrote press releases for Energy Resource map, "Short Notes" geologic report.

TYPING

- Typeset Mines Bulletin.
- Typeset corrections to Geologic Report 58.
- Typed Eakins talk for Northwest Mining Association, "Mineral exploration in Alaska - 1977."
- Typed Bundtzen talk for Yukon Geological Association, "General geology and mineral deposits of Southeastern Alaska."
- Typed AGS article.
- Miscellaneous correspondence, xeroxing, and report and map sales.

CARTOGRAPHY (College)

- Completed linework art for AGS article.
- Proofread plate for Geologic Report 58.
- Completed slides for Eakins, Bundtzen, and Barker talks.
- Completed explanations for AOFs 111A-C.
- Prepared masks for Talkeetna area plates for Reger, Carver, Kline (unnumbered report).
- Annual leave (11 days).

Mineral Laboratory

MEMORANDUM

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

State of Alaska

TO: Ross Schaff
State Geologist
Anchorage

DATE: October 27, 1977

FILE NO:

TELEPHONE NO:

SUBJECT: Monthly Report

FROM: Henry Potworowski *HJP*
Minerals Lab Supervisor
College

RECEIVED

NOV 1 1977

Div. of Geological Survey
Anchorage

1. ERDA's up-dated contract proposal should be in the mail as per telephone conversation with Richard Tobias, subcontract administrator for Bendix. Upon ratification of this contract, we are to received \$5,000 as down payment to get us going. The balance due us will be payed on a "as we submit results" basis.
2. As per our telephone conversation, we are \$4,500 short of funds to pay for the Perkin Elmer Atomic Absorption unit, but we can transfer \$4,000 from cat. 360(C) and then possibly another \$700 from 380 (control of sample analysis) to cover the balance: \$500 and shipping charges.
3. The lack of a temporary lab assistant to speed up the summer crunch is being keenly felt by Nam Veach and Nicki Coursey. They tell me that they spend 75% of their time doing technicians work, such as weighing samples, etc. Another lab assistant would double their sample output.

MEMORANDUM

State of Alaska

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross Schaff
State Geologist
Anchorage

DATE: November 28, 1977

FILE NO:

TELEPHONE NO:

AS?

FROM: Henry Potworowski
Minerals Lab Supervisor
College

SUBJECT: Monthly Report - November 1977

1. The Perkin-Elmer AA unit arrived on schedule with the MHS-1 unit missing. A claim has been duly filed.
2. The installation of the new PE unit will require the installation of another vent and this request has opened up the question of how efficient is the whole venting system in the lab. Staples Brown is checking out the fans on the roof and has come up with a suggestion to revamp the whole ventilating system in the lab, which has been found to be quite inadequate. He will submit an estimate of the cost.
3. Matt Johnson, our lab assistant, has resigned as of December 2, 1977, for personal reasons.

MEMORANDUM

DEPARTMENT OF NATURAL RESOURCES

DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS


State of Alaska

TO: Ross Schaff
State Geologist
Anchorage

DATE: December 27, 1977

FILE NO:

TELEPHONE NO:

FROM: Henry Potworowski 
Minerals Lab Supervisor
College

SUBJECT: Monthly Report - December 1977

The engineering problems associated with the installation of the PE 603 unit, are still being studied by Staples Brown, director of the university physical plant. It appears now that we may be able to get away with the purchase and installation of only one fan on the roof, as the old ventilating system in the lab may be revamped and upgraded with little additional cost.

Have had a conference with Dave Stone, regarding the extension of our capabilities into the field of paleo-magnetic determinations and we have drawn up a preliminary contract. This draft was submitted to Steve Hackett and yourself for comments and additional input.

Mike Ashwell, our new lab assistant (permanent) has taken 3 weeks of leave without pay. I have hired a subfill for this period. Nam Veach and Nicki Coursey have taken annual leave until January 3, 1978. Don Stein is planning to take an extensive leave around March 1 (after catching up on sample backlog).

DIVISION OF GEOLOGICAL AND GEOPHYSICAL SURVEYS

WEEKLY LABORATORY WORK SUMMARY

for the week of 10-3 to 10-14

RECEIVED

OCT 19 1977

Div. Of Geological Survey
Anchorage

	Public** Samples	Determin- ations	Division* Samples	Determin- ations
Backlog from last week	245		509	
Submitted during week	24		213	
Completed during week	0	0	38	76
Cumulative completed since January 1	714	9,882	1,402	6,588
Backlog at end of week	269		684	

Remarks:

Signed Mona G. Spector Date September 17, 1977

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

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

DIVISION OF GEOLOGICAL AND GEOPHYSICAL SURVEYS

WEEKLY LABORATORY WORK SUMMARY

for the week of 10-17 to 10-31

RECEIVED

NOV 3 1977

Div. Of Geological Survey
Anchorage

	Public** Samples	Determin- ations	Division* Samples	Determin- ations
Backlog from last week	269		684	
Submitted during week	32		9	
Completed during week	103	1,430	95	1,381
Cumulative completed since January 1	817	11,312	1,497	7,969
Backlog at end of week	198		598	

Remarks:

Signed Mona J. Rector Date October 31, 1977

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

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

DIVISION OF GEOLOGICAL AND GEOPHYSICAL SURVEYS

RECEIVED

WEEKLY LABORATORY WORK SUMMARY

NOV 16 1977

for the week of 11-1 to 11-15

Div. of Geological Survey
Washington

	Public** Samples	Determin- ations	Division* Samples	Determin- ations
Backlog from last week	198		598	
Submitted during week	14		214	
Completed during week	19	246	47	673
Cumulative completed since January 1	836	11,558	1,544	8,642
Backlog at end of week	193		765	

Remarks:

Signed Mona Hector Date November 15, 1977

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

DIVISION OF GEOLOGICAL AND GEOPHYSICAL SURVEYS

WEEKLY LABORATORY WORK SUMMARY

for the week of 11-16 to 11-30

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Div. Of Geological Survey
Anchorage

	Public** Samples	Determin- ations	Division* Samples	Determin- ations
Backlog from last week	193		765	
Submitted during week	11		29	
Completed during week	32	377	2	8
Cumulative completed since January 1	868	11,935	1,546	8,650
Backlog at end of week	172		792	

Remarks:

Signed Mona J. Sestak Date November 30, 1977

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

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

DIVISION OF GEOLOGICAL AND GEOPHYSICAL SURVEYS

WEEKLY LABORATORY WORK SUMMARY

for the week of 12-1 to 12-16

	Public** Samples	Determin- ations	Division* Samples	Determin- ations
Backlog from last week	172		792	
Submitted during week	4		70	
Completed during week	69	877	396	2,673
Cumulative completed since January 1	937	12,812	1,042	11,323
Backlog at end of week	107		466	

Remarks:

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Div. of Geological Survey
Anchorage

Signed Mona J. Rector Date December 16, 1977

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

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

DIVISION OF GEOLOGICAL AND GEOPHYSICAL SURVEYS

WEEKLY LABORATORY WORK SUMMARY

for the week of 12-19 to 12-30

	Public** Samples	Determin- ations	Division* Samples	Determin- ations
Backlog from last week	107		466	
Submitted during week	5		247	
Completed during week	5	59	0	0
Cumulative completed since January 1	942	12,871	1,942	11,323
Backlog at end of week	107		713	

Remarks:

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JAN 3 1978
Div. Of Geological Survey
Washington

Signed Mona J. Bector Date December 30, 1977

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

Regulation and Information

MEMORANDUM

State of Alaska

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross G. Schaff
State Geologist

DATE: November 25, 1977

FILE NO:

TELEPHONE NO:

FROM: Cleland N. Conwell
Mining Engineer *CN*

SUBJECT: Monthly report
September 25 through November 25

I. Consultations

<u>Agency</u>	<u>Date</u>	<u>Topic</u>
A. Federal		
1. Forest Service (Juneau) (Carl Swanson)	10/31	U.S. Borax road.
2. Forest Service (Juneau) (Carl Swanson)	11/4	U.S. Borax road.
3. Forest Service (Ketchikan) (John Rupp)	11/4	U.S. Borax road Will issue permit.
4. U.S. Bureau of Mines (Dave Carns)	11/8	Gravel deposits.
5. MESA (Bill Basco)	11/17	Better cooperation with state mine inspectors, and Premier Mine.
6. U.S. Bureau of Mines (Al Service)	11/17	Mined Land Reclamation.
7. U.S. Bureau of Mines (Al Service)	11/19	Abandoned coal mine lands in Alaska.
8. U.S. Bureau of Mines (Al Service)	11/21	R-2 land in national forests.
B. State		
1. Div. of Energy & Power (Gene Rutledge & Dee Lane)	10/27	Review section on uranium.
2. Div. Mineral Energy Management (Joe Green)	11/2	Mineral land regulations and possible changes.
3. Div. Energy & Power (Dee Lane & Gene Rutledge)	11/14	Review section on coal.
4. Attorney General Office (Tom McGuire)	11/22	Mill at Fox.
5. Dept. of Transportation (Lou Sturgis)	11/23	Nome airport.
C. Other		
1. Atlantic Richfield (Russell J. Lechman & Robert S. Goble)	9/29	Synthetic crude.
2. Mobil Oil (Jesse C. Blackmon)	9/30	Energy minerals.
3. Polaris Steel (Dick Ferby)	11/17	SE Alaska magnetite deposits.
4. Urangesellschaft (Earl Abbott)	11/22	Uranium deposits.

II. Conferences

- | | | |
|--|----------|--------------------|
| A. Society of Mining Engineer
(St. Louis, MO) | 10/19-20 | Mining general. |
| B. Alaska Miners Association
(Anchorage) | 10/28-29 | Alaska mining. |
| C. Underwater Mining
(Seattle) | 11/10-11 | Underwater mining. |

III. Research

- A. Talkeetna (D-5) quadrangle.
- B. Graphic presentation of data.

IV. Status of reports

- A. State Energy Resource Map - at the printers - - proofs reviewed.
- B. Chignik-Herenden Bay. Editing complete and in final typing.
- C. Anchorage quadrangle coal map - - Art work complete, conference with Triplehorn on text.
- D. Preliminary sketches complete.
- E. Talkeetna (D-5) - - Sample sent to lab.

V. Mine inspections

- A. Usibelli - - coal - - November 3, 1977.

VI. Other

- A. Reviewed two parts of a report for Division of Energy and Power.

MEMORANDUM

State of Alaska

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF GEOLOGICAL & GEOPHYSICAL SURVEYS

TO: Ross G. Schaff
State Geologist

DATE: December 23, 1977

FILE NO:

TELEPHONE NO:

FROM: Cleland N. Conwell
Mining Engineer *CNC*

SUBJECT: Monthly report
November 25 thru Dec. 21, 1977

I. Consultations

<u>Agency</u>	<u>Date</u>	<u>Topic</u>
A. Federal		
1. U.S.B.M. (Dave Carnes)	12/19	Sand and gravel production, Alaska.
B. State		
1. DGGs (Ross Schaff and Don McGee)	11/28	Coal research.
C. Other		
1. Bendix - ERDA contractor (W.A. Burgett)	12/8	Uranium potential in Alaska.
2. Ray Charles	12/19	Request to present a paper at International Conference on Slope Stability.

II. Conferences - none

III. Research

- A. Talkeetna (D-5) quadrangle.
- B. Mineral preparation on a lead-zinc ore.
- C. Mineral preparation on a antimony ore.

IV. Status of reports

- A. State Energy Resource map released.
- B. Chignik-Herenden Bay, Editing complete and in final typing.
- C. Anchorage quadrangle coal map. Art work complete - preparing text.
- D. Talkeetna (D-5) waiting on sample analyses.

V. Mine inspection

- A. Usibelli coal - December 7, 1977.

DIVISION OF GEOLOGICAL SURVEY
MONTHLY CENTRAL RECORDING WORK SUMMARY
For Period Ending 10-26-77

	Claim Loc. Notices		Affidavits of Labor		Deeds	Misc.	Total	
	Doc.	Clms	Doc.	Clms	Doc.	Doc.	Doc.	Clms
Backlog	3	3	2	2	21	5	31	5
Received	1,903	1,903	351	3,855	13	191	2,458	5,758
Processed	1,891	1,891	348	3,848	28	192	2,459	5,739
Backlog	15	15	5	9	6	4	30	24
Cumulative Received Since Jan. 1	9,968	9,968	852	10,505	216	915	11,951	20,473
Cumulative Processed Since Jan. 1	10,021	10,021	977	12,637	245	916	21,159	22,658

REMARKS:

In addition to processing above mining documents, assisted 174 visitors which included the entire earth science class of North Pole High School who made a tour of our facilities. Still have a lot of interest in the uranium at Mt. Prindle, have processed 196 claims but have been informed that there is an additional 600 or more to be received from the district recorder.

Carole and I visited the Fairbanks district recorders office last week to find out their method of microfilming, storage and retrieval of mining documents. They are now converting to microfiche and the end product seems to be an improvement over the film - the documents are much more legible.

Have been working on a listing of companies and prospectors, updating and correcting names and address for Gil Eakins for a questionnaire he plans to mail.

Distributed information as per attached listing.

Signed Mildred Eakins
Mining Information Specialist

Requests answered:

Mail

Telephone

6

36

Distribution:

Information
Circulars

Reports

56

Geologic

Geochemical

8 Miscellaneous

Xeroxing 200 pages

Number of Visitors 174

DIVISION OF GEOLOGICAL SURVEY
MONTHLY CENTRAL RECORDING WORK SUMMARY
For Period Ending 11-25-77

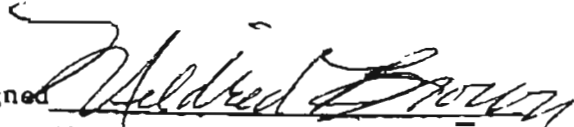
	Claim Loc. Notices		Affidavits of Labor		Deeds	Misc.	Total	
	Doc.	Clms	Doc.	Clms	Doc.	Doc.	Doc.	Clms
Backlog	15	15	5	9	6	4	30	24
Received	3,041	3,041	342	6,545	39	293	3,715	9,586
Processed	3,054	3,054	344	6,549	42	293	3,733	9,603
Backlog	2	2	3	5	3	4	12	7
Cumulative Received Since Jan. 1	13,009	13,009	1,194	17,050	255	1,208	15,666	30,059
Cumulative Processed Since Jan. 1	13,075	13,075	1,321	19,186	287	1,209	15,892	32,261

REMARKS:

Miscellaneous activities:

Prepared a listing of 1977 activity; areas of heavy claim staking and list of companies for Gil Eakins to incorporate into a speech he is preparing for a conference in December. Have revised and prepared a rough draft of Information Circular No. 7 "Alaskan Companies and Prospectors". Earl Beistline send 3 students from the school of mines to our office for a review of our system of indexing mining claims. Ernie Wolff of MRL accompanied them.

Activities as per attached listing.

Signed 
Mining Information Specialist

Requests answered:

Mail

2

Telephone

54

Distribution:

Information
Circulars

10

Reports

Geologic

Geochemical

8 Miscellaneous

Xeroxing 150 pages

Number of Visitors 65

DIVISION OF GEOLOGICAL SURVEY
MONTHLY CENTRAL RECORDING WORK SUMMARY
For Period Ending 12-23-77

	Claim Loc. Notices		Affidavits of Labor		Deeds	Misc.	Total	
	Doc.	Clms	Doc.	Clms	Doc.	Doc.	Doc.	Clms
Backlog	2	2	3	5	3	4	12	7
Received	4,303	4,303	692	24,992	36	70	5,101	29,295
Processed	4,303	4,303	687	24,960	34	70	5,094	29,263
Backlog	2	2	8	37	5	4	19	39
Cumulative Received Since Jan. 1	17,312	17,312	1,886	42,042	291	1,278	20,767	59,354
Cumulative Processed Since Jan. 1	17,378	17,378	2,008	44,146	321	1,279	20,986	61,524

REMARKS:

Typed papers for Wyatt Gilbert, Tom Bundtzen and Jim Barker for presentation at a meeting attended in Whitehorse. During Carole's absence (vacation) have been typing delivery orders for lab; some personnel work.

Prepared activity report which consisted of 90 pages of information to be submitted to Data Control on December 30. While preparing this report, removed tags from all the inactive claims so that the Kardex file is up to date.

Phil Holdsworth visited one day, doing research on claims on forest lands in southeastern Alaska for the forest service.

Information distributed and requests answered as per attached listing.

Signed Michael E. Smith
Mining Information Specialist

Requests answered:

Mail

3

Telephone

46

Distribution:

Information
Circulars

9

Reports

1

Geologic

Geochemical

6

Miscellaneous

Xeroxing 158 pages

Number of Visitors 80

DIVISION OF GEOLOGICAL AND GEOPHYSICAL SURVEYS

Monthly Work Report

Month of October 1977

	Fairbanks	Anchorage	Juneau	Ketchikan	Total
1. Visitors	191	64	26	32	313
2. Annual reports	6	4	6	0	16
3. Miscellaneous papers	3	13	1	0	17
4. Miscellaneous publications	26	24	9	3	62
5. Requests for information received by mail	88	13	27	1	129
6. Requests for information received by phone	15	51	18	41	125
7. Rock samples	20	0	0	1	21
8. Bibliographies	7	6	0	0	13
9. Geologic & Geochem reports	128	29	19	0	176
10. Information circulars	393	38	46	9	486
11. Laboratory notes & reports	40	5	14	0	59
12. Aeromag maps	0	6	1	0	7
13. Special reports	16	11	4	1	32
14. Alaska Open File Reports	5	23	2	0	30
15. Letters	0	1	6	6	13
16. Monthly Mines Bulletin	1	0	12	2	15
17. Xeroxing (pgs.)	0	156	73	0	229
18.					
19.					
20.					

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DEC 1 1977

DIVISION OF GEOLOGICAL AND GEOPHYSICAL SURVEYS

Div. of Geological Survey
AnchorageMonthly Work ReportMonth of November 1977

	Fairbanks	Anchorage	Juneau	Ketchikan	Total
1. Visitors	81	25	12	27	145
2. Annual reports	16	0	1	0	17
3. Miscellaneous papers	1	7	0	0	8
4. Miscellaneous publications	24	11	4	3	42
5. Requests for information received by mail	75	20	3	2	110
6. Requests for information received by phone	10	18	6	37	71
7. Rock samples	3	0	0	4	7
8. Bibliographies	4	2	1	0	7
9. Geologic & Geochem reports	36	55	4	0	95
10. Information circulars	235	63	18	0	316
11. Laboratory notes & reports	3	21	0	0	24
12. Aeromag maps	16	3	0	0	19
13. Special reports	6	3	1	0	10
14. Alaska Open File Reports	1	10	0	0	11
15. Letters	1	2	1	9	13
16. Monthly Mines Bulletin	3	0	3	2	8
17. Xeroxing (pgs.)	0	201	75	0	276
18.					
19.					
20.					

DIVISION OF GEOLOGICAL AND GEOPHYSICAL SURVEYS

Monthly Work Report

Month of December 1977

	Fairbanks	Anchorage	Juneau	Ketchikan	Total
1. Visitors	107	22	8	12	149
2. Annual reports	3	0	4	2	9
3. Miscellaneous papers	0	10	3	0	13
4. Miscellaneous publications	57	12	3	12	84
5. Requests for information received by mail	53	17	30	0	100
6. Requests for information received by phone	15	14	10	17	56
7. Rock samples	0	0	0	0	0
8. Bibliographies	2	0	0	0	2
9. Geologic & Geochem reports	131	4	2	0	137
10. Information circulars	123	33	76	23	255
11. Laboratory notes & reports	0	0	0	0	0
12. Aeromag maps	1	6	0	0	7
13. Special reports	1	0	0	0	1
14. Alaska Open File Reports	5	7	0	0	12
15. Letters	7	0	4	4	15
16. Monthly Mines Bulletin	0	0	6	2	8
17. Xeroxing (pgs.)	0	50	70	2	122
18.					
19.					
20.					