

The Chairman led from the discussion of the recent Alaska program appraisal studies into a discussion of Part A of our program report. He read from the instructions concerning the preparation of this part of the report, stressing that it was to serve as a basic reference work presenting the background of the region and its long-range needs and the long-range objectives of the Department in relation thereto. Collins said that in his opinion he thought the Chairman had accomplished this job in the introductory chapters of the present Six-Year Report and suggested that it shouldn't be necessary in the case of the Alaska Field Committee to come up with a separate Part A. The Chairman replied that although he had put into these chapters a great deal of the sort of thing with which Part A would be primarily concerned, he would like the Field Committee to look upon this as merely a summarized statement of the larger report.

In reply to a remark that this sounded like "some more planning", the Chairman explained that this Part A was not a "Plan" but rather he hoped it would be a reference work and a programming tool. It would be a place to which the various agencies could turn to get a clear picture of the region's economy, its needs and then use this as a basis for intelligent programming of their own individual operations. He emphasized that the Field Committee was not in the business of producing detailed "blueprints".

Trimble brought up the difficulties he encounters as finance examiner for the Alaska Public Works. In his job he is constantly called upon to pass judgement as to whether a given community will be a good credit risk for the next twenty years or more. He asked if this Part A would be of any assistance to him in this regard. The Chairman said that the type of study he had in mind should fit Trimble's needs exactly. The report should give us some sort of basis for predicting what our programs should do in the next twenty-five years. The assumptions upon which this was made, for example, could be used by Trimble in planning his community financing programs for the same period. He referred to the method by which the Program Staff had assembled the Department's contribution to the President's "State of the Union" and "Economic Message", the general sort of problems that Part A would be aiming to work on. The Chairman did not know whether it would be humanly possible to produce such a report by November, but he believed that it is of such potential value to everybody that we should at least make a good try to do so.

Johnson suggested that this study should also make some comparisons between Alaska programs and those of the Canadians. He remarked that the Canadian northlands are not going in for the huge scale of military construction we have in Alaska, and yet that country seems to be really booming in the development of resources which we also have in great abundance in Alaska. He said he didn't think it was all related to differences in tax programs, although taxes were certainly the most important basic reason. Reed said that Kirk Stone

had a student who was going into these comparisons thoroughly and suggested that the Chairman contact Stone in the course of his work.

Reed said he didn't think it would be possible for the Field Committee as a committee to prepare this report. The responsibility for directing the job and doing a great deal of the leg work and final writing fell naturally into the Chairman's lap. The Chairman agreed, but added that each member would be called upon to share in its preparation and also in the review of the final draft. The magnitude of the job called for additional technical assistance, however, and the Chairman reported on a proposal to secure the services of Joe Fisher of the President's Council of Economic Advisors on a temporary assignment basis this summer. Because of Fisher's background in regional economic work and his knowledge of Alaska, his services would be of considerable value to us in meeting a November deadline. Because he would be on a special reimbursable basis only when actually working with us, the out-of-pocket costs to the Department would be quite modest. Even so, the Chairman said that reports from Washington on this plan were not too encouraging, and he asked if the Field Committee would be in favor of recommending the securing of adequate technical assistance. Reed said he thought that the preparation of Part A of the nature discussed by the Chairman would be one of the most important things the Field Committee could accomplish this year and felt that all needed assistance should be made available to assure its being done. Collins made the following motion which was approved by all members present (ANS representative absent at time of vote): "The Alaska Field Committee requests that the Program Staff and the Office of the Secretary secure suitable technical assistance to facilitate the production of a satisfactory Part A to the Alaska Program Report."

(2) Annual Revisions of Program Report

While the preparation of the present Six-Year Program Report was still fresh in everybody's minds, the Chairman thought this would be the best time to hold a post-mortem and discuss the methods to be used in preparing the next report. The Chairman said he was not going to indulge in any long alibi session on why we missed the March 15 deadline but he would state a few facts. Assembly of the report was not possible until the week of March 16-21, advance copies being mailed out on March 20 and 21, the remaining copies going out March 28, thirteen days after the deadline set. He added that we might take a little comfort in the news that ours was not the last program report to cross the finish line, but that we should be able with what we have learned this time to do a better job next year.

In addition to his own inadequacies of staff assistance and experience in organizing such an undertaking, the other reasons advanced for missing the deadline were (1) the lateness in getting the project started (in most cases the January Field Committee meeting was the beginning), (2) the delays in submission of material (five completed

contributions were received the last week in January, two in the last week in February, three in the first week in March and additional information requested was even more tardy, the last two coming in on March 7 and 12), (3) delay in issuance of the instructions and the lack of any time to work out interpretations, (4) press of other demands upon the members attention at this time of year and the low priority given to program reports by some.

We should be able to correct most of these shortcomings next time. Now that we've followed the instructions through once and when we have received all comments on the finished product, most of the confusion arising out of not knowing exactly what was wanted will have been removed. The Chairman asked that next time each member designate some person on his stenographic-clerical staff to be available at all times to do the typing and assembly work required in each submission, to keep account of the status of the work in process and to follow up on replies to correspondence from the Chairman. In at least one case in the present report preparation, a member admitted that a long delay was simply due to forgetting and mislaying some correspondence. Finally, a letter from the Alaska Road Commission was read which suggested that consideration be given to a change in the dates of the "call for program reports" to fit more logically into the calls for budget estimates and other reports of the Department.

The Chairman then read excerpts from letters from the Program Staff (April 11 and 26) outlining how the reports were being used at the Washington level, in particular in connection with the 1954 budget estimates.

The members comments were requested as to their views on the new format and content of the report. Reed thought it was very good and he found the breakdown and pattern to be very useful and easy to follow. Collins commented that he had run into considerable trouble and confusion in attempting to clear the type of table breakdown he thought would be most valuable. The Chairman shared Collins' views as to the type of table breakdown and the amount of detail which would make the report most useful. He stressed that always we should be guided by what we believe will induce others to use the report and what will make the report most useful.

Collins said that to his mind the Fish and Wildlife chapter was the one coming closest to the ideal. He said he was able to read it through with sustained interest and at every point knew just what they were talking about and found the relation between the tables and narrative very well thought out and executed. The Chairman said that the credit for this fine performance was due first to the high priority of importance given the preparation of the report by Clarence Rhode in making the assignment to his staff, secondly and most important to the great amount of time, effort and thought which Howard Baltzo personally had given to the actual compilation, organizing and interpreting and writing of the chapter, and finally to the spirit of cooperation he

found among the various divisions of the Service in supplying their original material. In particular, he commended Baltzo for his dedication to the task and urged that all members who hadn't done so should study the Fish and Wildlife Service chapter carefully as a model of what should be done in their own areas.

Land Management Problems:

(1) Land Settlement and Agricultural Development

The Chairman stated that two years ago (July 11 and 12, 1950) the Field Committee met with Territorial and Federal agricultural officials to discuss land settlement and agricultural development problems. He read the excerpts from the minutes of that meeting and the action taken by the Field Committee in appointing a special committee composed of these representatives to formulate recommendations for further action. The next reference to these problems came at the tenth meeting of the Field Committee (January 11 and 12, 1951) at which time these matters were once again brought up for discussion and a three man subcommittee appointed to study the reports of the settlement committee and draft recommendations concerning it. Because of the semi-active period which followed, all further follow-up of these matters was suspended.

The Chairman said that the purpose of this joint-meeting was to re-introduce these problems and the persons primarily concerned with them to the members of the present Field Committee by calling for brief progress reports as to what has happened in the two years since the Field Committee held such a joint meeting. He did not anticipate that any drastic new course of action would result and he certainly did not plan to appoint any further committee at this time. The present discussion was to be primarily informational and he said we would plan to hold a follow-up joint meeting as a part of the next Field Committee meeting.

(a) Bureau of Land Management

Lowell Puckett was asked to open the discussion by giving a report of the recent activities of the BLM in land settlement and development. Puckett announced that as of this day, another important area of the Kenai Peninsula had been opened for filings. He explained the procedures involved in the filing and processing of small tract site and homestead applications and cited specific examples to illustrate. He then commented on the present dormant status of group settlement and land classification legislation and the need for such legislation, and briefly summarized other pending legislation which would have important effects. He briefly outlined the progress being made on the guided settlement program under the cooperative efforts of the BLM and the Soil Conservation Service.

(b) Soil Conservation Service

The Chairman commented upon the fine working relations which had been developed between the BLM and the SCS and cited this as a good example of what we should strive to achieve in all of our other inter-agency relations. He then introduced Mr. C. W. Wilson of the SCS. Wilson said their activities could be classified under two main headings: (1) surveys and investigations and (2) the detailed operations of application and education. Most important of their survey and investigations activities are the land capability surveys and investigations of potential agricultural areas being conducted in close cooperation with BLM. He cited the number of acres which had been so studied in the past two years and plans for the immediate future. He commented upon SCS work for the Bureau of Reclamation in conducting special investigations of the Eklutna reservoir and basin. Reclamation finances such work and the SCS supplies the technicians. Finally, SCS assists farmers and settlers in applying wise land use on their lands.

(c) Agricultural Experiment Station

Don Irwin of the Agricultural Experiment Station was introduced and presented a lengthy report of what they have accomplished during the past two years in conducting research in soils, fertilizers, soil uses, crop development and improvement, weed and disease control, animal and dairy production, etc. He discussed in detail the work the Station has done in cooperation with the BLM and SCS in their joint programs and cited in particular the economic and marketing studies made for the Kenai area. He commented upon the need for improvement in the procurement practices of the Air Force as a means of assisting farmers in the planning of their production and marketing activities. He also reported upon the experimental work being conducted on techniques of building farm homes and buildings with native materials.

(d) Alaska Road Commission

Bill Niemi of the Alaska Road Commission was next called upon to comment briefly upon their farmers' road program. Niemi said that there has long been two conflicting theories of the timing of such road building, one being that the homesteaders should go out first and when they had proven their staying power the roads would be pushed out to them, and the other theory being that potentially good agricultural areas should be opened to homesteaders by the advance building of roads. He said the practice of the first theory often meant that we build roads in so the settlers could drive away in style from their abandoned farms. The new emphasis upon doing all possible to stimulate increased and sounder land settlement in Alaska has made it imperative to shift the road program to the second theory. Niemi said that in planning their farmers' roads they look to the BLM, SCS and AES for guidance in putting them where they will do the most good in promoting the general aims of stimulating sound settlement.

(e) Farmers Home Administration

The Chairman reviewed what had been said concerning the programs under which prospective settlers and farmers are assisted in getting land, planning for its best use, and getting access roads. There is one further aspect of the total program for the promotion of settlement and that is financial assistance to the prospective settler. Mr. I. M. C. Anderson of the Farmers Home Administration was introduced. Anderson reviewed the changes which had been made in the past two years in relation to Alaska rural housing loans. Loan limits for chattel loans had been increased to \$10,000 and in addition to the usual farm ownership loan for full-time farmers, there had been added a housing loan program for part-time farmers. Thus the Alaska housing loan system now has complete coverage with the Alaska Housing Authority taking care of the town and urban dweller and the Farmers Home Administration having the authority (but insufficient funds) to finance those who derive their income in whole or in small part from farming. He commented upon their specification requirements, how the various veterans' aid measures were coordinated with their program, and their assistance to farmers in getting credit for their farming operations.

Each of the above talks was followed by short question periods and discussion. The Chairman thanked those who had participated and said that the Field Committee planned to have a follow-up meeting with them at the next regular meeting.

(2) Public Housing and Land

Mr. Glenn Wilder of the Alaska Housing Authority was introduced. The Chairman said that the AHA has very close relations with the BLM and APW. Wilder outlined the history of the AHA from its creation in 1949 to date. The Chairman said that shortly before the meeting he had been informed that the AHA had been experiencing some delays in securing a parcel of land in Goose Lake Reserve for a sponsor-builder of housing projects. Wilder said that they were hoping to get this matter settled so that the sponsor-builder could provide the housing during the 1952 season. The Field Committee, however, had a couple of years ago outlined a procedure for the release of such lands which required a topographical survey and a suggested development plan. He hoped the Field Committee would consider releasing about 200 acres without such restrictive requirements. Puckett said that he had been approached on the matter several times, but that the AHA had never decided exactly how much land they wanted to secure (at different times it ranged from 150 to 200 acres) nor where it would be located. Before BLM can even start to consider such a request, the absolute minimum requirement is that AHA give a legal description of the subject land so that it can be identified. The AHA has never identified this land beyond asking for something in the Goose Lake Reserve. Wilder said that the land situation is very complicated. They discovered that one parcel they were interested in would have to be secured through the

Army rather than the BLM. Although a part of the withdrawal, it had been a patented homestead. The Chairman suggested that the AHA continue to deal with BLM and when they had decided upon the particular piece of land they wanted, Puckett would inform the other members of the Field Committee and the Chairman would get their individual opinions as to the advisability of the proposed relinquishment of land.

(3) Alaska Withdrawal Inventory:

The Chairman reported that the Alaska Withdrawal Inventory and Atlas was nearing completion. He had hoped that it would be finished before this meeting, but as it was not he suggested that the discussion of the work of the Field Committee in reviewing the withdrawals and recommending restorations be postponed until the next meeting.

(4) Road Rights-of-Way

Niemi said that the Alaska road rights-of-way laws are not clear and contain important contradictions and conflicts. He asked that a Subcommittee of the Field Committee be formed to investigate and report on all land laws and regulations relating to rights-of-ways. Such a motion was made by Niemi and unanimously approved by the Field Committee. The following persons were named as members of the Subcommittee:

Francis X. Riley, Alaska Public Works
J. J. Delaney, The Alaska Railroad
A. Barber, Bureau of Land Management
Wm. Adams, Alaska Road Commission

Bill Adams was named as chairman and was to be instructed to make the initial assignments to the Subcommittee.

(5) Recreation

For the benefit of the alternates present, the Chairman reviewed the earlier correspondence and discussion leading up to the Field Committee recommendation that the BLM be designated as the agency primarily responsible for recreational development on the public domain. He complimented Puckett and Robinson for their fine contributions to the chapter of the Program Report dealing with recreational resources.

Collins stated that thanks to the Field Committee's recent actions and the recreation resources chapter of its Six-Year Program Report, the Department could no longer accuse us of allowing recreation to fall between the agencies. Although he felt the recreation chapter was good and by far the best presentation yet made, he was also slightly disappointed in it. The NPS, BLM and FWS were the only agencies making contributions to the chapter. At the January meeting, he had declared that each and every agency of Interior had some aspect of its program related to recreation in the broad sense, and if every-

body had examined their individual programs with this in mind they would find something to comment upon or program for in preparing their contributions to the Program Report. Collins concluded by a progress report on the Alaska recreation survey. It was decided that following further review of this subject, it would be picked up again at the next meeting.

Mineral Resources Development:

Reed introduced Leo Saarela and told of his duties. The Geological Survey is responsible for the supervision of leases of public land for mineral development and the enforcement of conservation practices. Previously this was done under a cooperative arrangement with the Territorial Department of Mines of which Saarela was Commissioner. Saarela is now a full-time employee of the Survey and will be responsible for the duties he previously performed. He will be stationed in Anchorage. Reed introduced George Gates as the Chief of the Alaska Geological Branch stationed in San Francisco. He commented briefly upon the recent reorganizations of the Survey.

The Chairman asked Reed for the latest information on the coal situation, and Reed replied that it seemed to be well in hand. With good fortune and hard work, it should be possible to clear all hurdles this season.

Hinman asked about the status of the cement plant study by Ivan Bloch. Reed said it was still in the process of engineering feasibility investigation the last he heard of it.

Next Meeting

It was decided to hold the next meeting of the Field Committee at Mt. McKinley Park, September 20 and 21. An earlier date did not appear feasible because of previous travel plans of the members and the Chairman. The suggested dates and location would tie in with the annual Alaska Science Conference, September 22 through 27, which most members were planning to attend in any case. It was also desirable as a means of associating the Field Committee with a successfully operating inter-agency activity.

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Attachment

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UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SECRETARY
ALASKA FIELD COMMITTEE
P. O. Box 3093
Juneau, Alaska

April 30, 1952

Mr. Lyle Craine
Acting Director
Program Staff
Office of the Secretary
Washington, D. C.

Dear Mr. Craine:

Shortly before the Field Committee meeting I received from you a copy of a "Memorandum re group meeting on April 14, 1952, concerning administrative problems in Alaska" held by Administrative Secretary Northrop to consider matters embodied in the Field Committee report dated November 17, 1950 and Mr. Fitch's report dated March 6, 1952. The memorandum received indicated that the group, presumably made up of representatives of Mr. Northrop's office, and the Bureaus agreed on twelve specific recommendations. The thought was expressed at our Field Committee meeting that perhaps the record did not receive the full concurrence of all those present at Mr. Northrop's meeting. In any event the Field Committee did not feel that the administrative problems would be adequately solved by the setting up of another administrative committee of representatives of the Bureaus in Alaska fully authorized to act for the Bureaus and to report directly to Mr. Northrop's office with no liaison to the Field Committee.

Pending the action by the Field Committee's administrative Sub-Committee and transmittal by the Field Committee of its opinions as to a workable modification of the twelve points, individual reports of Field Committee members to their own Bureaus are likely to be submitted. These may or may not represent the final agreed upon action of the Field Committee as a body.

With the concurrence of the Field Committee, therefore, I have re-activated the Administrative Sub-Committee of the Field Committee to continue with the consideration of administrative problems, including among other duties the review and formulating of recommendations relating to the twelve points contained in the memorandum of record of Mr. Northrop's meeting. That Sub-Committee will report back to the Field Committee, and after consideration, the Field Committee will then report to you in this matter. The Field Committee's interim recommendations on the handling of administrative problems are expressed in the attached resolution adopted at this meeting. I assume that you will call this action to the attention of the Administrative Assistant Secretary.

/s/ George W. Rogers
Secretary, Alaska Field Committee

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UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF TERRITORIES

FILE COPY
Surname:

DEC 17 1952

Mr. George Rogers
Chairman, Alaska Field Committee
Juneau, Alaska

FILED

Dear George:

I have just had a chance to read the minutes of the Fifteenth Meeting of the Alaska Field Committee. This material is extremely interesting and indicates that a fine job is being done in coordinating the work of the several Interior Department bureaus working in Alaska. I want to take this occasion to congratulate you and the Committee for your very fine work.

I certainly agree with Lorain's remarks and the Committee's agreement as to the importance of constructing as soon as possible roads into remote and prospective mining areas. We all know that the early completion of the Denali Highway and the Copper River Highway are extremely important from a military standpoint. It will also play such an important part to develop mining in those areas, and as has been proven in other places a road to Healy River coal property would certainly lead to the development of a town there and would stabilize the labor situation in that industry. I hope Congress will understand this and provide money for the early completion of these roads as well as for additional roads that can lead into the known mineral areas of the Kuskokwim and Yukon River area.

I also hope that sufficient funds will be forthcoming to help The Alaska Railroad complete its rehabilitation program and to construct the necessary spur lines into the coal fields and other newly developed areas, as well as to provide them with the additional necessary rolling stock.

It has been interesting to read the Alaskan papers and see the fine public relations work that several of the bureaus are now doing. I think the Alaska Native Service has done a fine job in publicizing the work they are doing in their nurses training program and educational and health work at Mt. Edgecumbe and for the great interest they are creating for the development of a reindeer industry.

I would be interested to know what help the Committee or any of the bureaus might be able to give the Legislature in the form of

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drafts to create territorial land, park, transportation and other boards that appear necessary at this time.

Best personal wishes to you and the family for a very Merry Christmas and a Happy New Year.

Sincerely yours,

(Sgd.) Joe

Jos. T. Flakne
Chief, Alaska Division

JTFLAKNE/ep
12/17/52

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UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SECRETARY
WASHINGTON 25, D. C.

Memorandum

To: Heads of Bureaus and Offices

From: Assistant Director, Program Staff

November 25, 1952
1. Wheeler *Wheeler 11/28/52*
3. Davis *880 11/23*
2. Flakus *917. 11/19*

FILES		
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Attached for your information are copies of the minutes of the following Field Committee meetings:

Alaska Field Committee, held September 20-21-22, 1952

Colorado River-Great Basin Field Committee, held October 22, 1952

Pacific Northwest Field Committee, held November 7, 1952
(Correction of the minutes of the Pacific Northwest Field Committee meeting)

Southwest Field Committee, held October 8-9, 1952

Copies to:

Lyle E. Graine
Lyle E. Graine
Assistant Director

- The Secretary
- The Under Secretary
- Assistant to the Secretary
- Assistant Secretary ~~Wolfson~~ *Wolfson*
- Assistant Secretary ~~Rose McKinney~~ *Rose McKinney*
- Administrative Assistant Secretary ~~Northrop~~ *Northrop* (cc: ~~Mr. Beasley~~ *Mr. Larson*)
- Commissioner, Bureau of Reclamation
- Commissioner, Bureau of Indian Affairs
- Director, Bureau of Mines
- Director, National Park Service
- Director, Fish and Wildlife Service
- Director, Bureau of Land Management
- Director, Division of Information
- Director, Oil and Gas Division
- The Solicitor
- ~~Director, Office of Territories~~
- Director, Geological Survey
- Administrator, Bonneville Power Administration
- Director, Division of Geography
- Administrator, Southwestern Power Administration
- Administrator, Southeastern Power Administration (Elberton, Georgia)
- Program Staff
- Library
- Director, Division of Land Utilization
- Director, Division of Water and Power
- Director, Division of Minerals and Fuels
- Director, Division of International Activities

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MINUTES OF FIFTEENTH MEETING - ALASKA FIELD COMMITTEE
September 20-21-22, 1952 - McKinley Park, Alaska

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On September 20, 1952 the fifteenth meeting of the Alaska Field Committee convened at 1:30 o'clock at McKinley Park Hotel, McKinley Park, Alaska. The following Field Committee members and alternates were in attendance:

ATTENDANCE

ALASKA NATIVE SERVICE
Hugh J. Wade (member)

ALASKA PUBLIC WORKS
Webb W. Trimble (alternate)

ALASKA RAILROAD
Elroy F. Hinman (alternate)

ALASKA ROAD COMMISSION
Wm. J. Niemi (alternate)

FISH AND WILDLIFE SERVICE
Clarence J. Rhode (member)
C. Howard Baltzo (alternate)

GEOLOGICAL SURVEY
John C. Reed (member)
Leo H. Saarela (alternate)
George O. Gates (San Francisco)
Earle J. Fennell (Wash., D. C.)

LAND MANAGEMENT, BUREAU OF
Roger R. Robinson (alternate)

MINES, BUREAU OF
Sinclair H. Lorain (member)
Leon W. Dupuy (Wash., D. C.)

NATIONAL PARK SERVICE
George L. Collins (member)
Ben H. Thompson (Wash., D. C.)
Arthur Hehr (Mt. McKinley Park)

OFFICE OF THE SECRETARY
George W. Rogers (Chairman)
Ruth Bouril (Staff Assistant)
Maxine C. Lund (Secretary)

RECLAMATION, BUREAU OF
Richmond C. Johnson (alternate)

M. W. Goding, Division of Land Utilization, Washington, D. C.

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SUMMARY OF AGENDA, CONCLUSIONS AND ACTIONS

1. The President's Materials Policy Commission Report and The Department's Long-Range Programing:

Summary of Volume I of the report of the President's Materials Policy Commission and discussion of the significance of the report, particularly with respect to the preparation of Part A.

2. Bureau Programing:

Discussion of progress being made by various bureaus in their programing operations and by the Program Staff in its review of program improvement in the Department.

Resolution adopted concerning need for adequate access roads to coal areas.

3. Availability of Basic Data to the Public:

Reports by the Geological Survey and the Fish and Wildlife Service on recent moves to increase the general use of their facilities and information by the public.

4. Forest Management and Fire Control:

Statement on the forest management and fire control programs of the Bureau of Land Management. General discussion of the importance of the fire control program from the standpoint of the programs of other bureaus.

5. Susitna River Basin Report:

General discussion of Susitna River Basin report, which has been distributed to Field Committee members in draft form and for specific written comment just prior to the meeting. The Committee concluded (1) that the report represents an important step toward comprehensive treatment of basin resources, (2) that the report as written is nevertheless a Reclamation report on the hydro-electric potential of the basin rather than a Departmental report on the water resources of the basin, and (3) that it is essential that when the Department, the Bureau of the Budget and the Congress consider the granting of investigation money to the Bureau of Reclamation they consider at the same time the granting of funds required to carry out related investigations by other functional bureaus.

6. The Taiya Project and Its Implications for Departmental Programing:

Statements on known and potential resources in the Taiya project area. Discussion of possible effects of Taiya project on Departmental programs in the area.

Committee agreed that effort should be made to insure availability of surplus power for uses other than aluminum production, that investigations of the area by Interior agencies should be continued, and that the Committee's views on these matters should be brought specifically to the attention of the Secretary's office.

7. Susitna Flats Withdrawal:

Discussion of withdrawal announcement and of alternative sites that had been considered for use as an anti-aircraft firing range.

8. Chugach National Forest Eliminations

Proposal of the Office of Territories read and discussed. Letter containing recommendation of Office of Territories to be duplicated and comments solicited from committee members.

9. Administrative Committee:

Proposals for the establishment of an Administrative Committee still under review at the Washington level.

10. Right-of-Way Sub-Committee:

Report on the progress to date of the right-of-way sub-committee. Discussion of the proper role of the subcommittee with respect to land problems in general.

11. Public Relations:

Proposal that the Alaska Field Committee give consideration to a publicity program was discussed.

12. Responsibilities Under Antiquities Act:

Copies of correspondence between the Secretary and the American Anthropological Association and of the Antiquities Act of 1906 were distributed. Bureau responsibilities and activities under the Act were reviewed.

13. Territorial Park System:

A bill to create a Territorial Park Commission, introduced at the last session of the Territorial Legislature, was discussed. BLM was asked for a statement on policies respecting recreational use of public lands.

14. Operation of the McKinley Park Hotel:

Description of invitation for bids for concession to operate Park Hotel and other public service facilities at the Park.

15. The Department in Arctic Alaska:

Panel discussion on various Departmental activities in the Arctic.

The President's Materials Policy Commission Report and The Department's Long-Range Programing:

The Chairman reported on the materials received from the Program Staff on the preparation of Part A of the program report. He said most of the material was of a rather abstract nature and his attempts to condense and summarize it for discussion purposes had not been too successful. After the arrival of the five volumes of the Paley Commission Report and a reading of the first volume, he had decided that it might be well to approach our long-range programing policy by talking about the Paley report, its methods of analysis and some of its conclusions. The Chairman gave a summary of the contents of Volume I and an analysis of its methods of dealing with the problem assigned to the Commission.

He then turned to a discussion of the significance of the Paley Commission Report to our own programing problems. The first significance of the Report he said arose from the conditions which made such a report necessary - which raised the question of the adequacy of our material means of sustaining our present civilization. The recognition that we are at a turning point in the relationships between our resources and our needs and desires gives greater importance and urgency to our efforts to plan our programs more realistically. The second significance of the Report in the Chairman's opinion was its emphasis upon the need for continuing resource programing based upon the "comprehensive look" and the "forward audit" of supply and demand. For the Alaska Field Committee and its attempts at programing, it points up the need of initiating and improving long-range programs as the basis upon which to build the six-year reports and finally the annual budgets of the Department. It underlines the need for intelligently directed action toward consciously determined goals. Finally, the methods of analysis and projections used in the Report have significance in themselves in providing a model which can be studied in approaching our long-range program goals. He translated the methods used in the Report in terms of the Alaska region to illustrate how the Alaska Field Committee might undertake the task assigned to it in Part A.

Turning to Part A of the Field Committee Reports, the Chairman discussed it as being the background document for the region which is to supply the data and analysis by which regional needs are determined and potential resource availabilities are indicated. From these determinations, program goals are to be deduced and the Department's responsibilities defined in concrete terms. He read excerpts from recent correspondence from the Program Staff bearing upon the preparation of Part A. He hoped to have an outline prepared soon which would be distributed to all members for their comments and suggestions. General discussion followed on scheduling preparation of Part A and Part B.

Commenting upon the Paley Commission Report itself, Johnson asked if it wasn't true that they left out all reference to Alaska. For example, there is no consideration given to the timber resources here and what they could contribute to the National timber picture. Goding said that he did prepare a section on Alaska, but that in the final shuffle it was not included.

Collins asked whether, when the outline for Part A is prepared, the Chairman would be gearing it pretty much to the Paley Commission Report. The Chairman replied that the outline would be somewhat broader than the Paley Report. The Field Committee is not going to be limited to the same range of resources, but will probably use only the general approach used in the Report in getting at the long-range projections. Collins expressed relief as he thought the Paley Report was restricted to industrial materials almost entirely. He felt that we shouldn't get away from the "package approach" in our resources programing. Referring to the Commission's task of investigating the "material means of sustaining civilization" he thought it should be broadened to include all means and the basis of civilization itself. The Chairman referred to the broader treatment given in the Economic Reports of the President as being closer to our scope.

Bureau Programing:

The Chairman commented on progress being made by the Program Staff in its review of program improvement in the Department and in particular on improvement of program-budget relationships. The comments of the Washington bureaus on the Alaska Field Committee's last six-year report and the Chairman's recent meetings in Washington on the report were cited as evidence of a growing acceptance of the value of programing in guiding operations.

(a) Bureau of Mines:

The Chairman commented briefly on the Program Staff's study of the programing methods of five bureaus and elaborated upon the Bureau of Mines' recent changes. There has been a shift in emphasis to developing longer-range programs for commodity groups as a result of the Paley Commission investigations and the reorganizations of the Bureau. The trend toward regionalization of responsibility for operations has been having effects upon the Washington divisions' functions. He introduced Mr. Leon Dupuy of the Bureau's Washington office and stated that the position he occupies is a relatively new one and is directly related to the recent changes in programing with the Bureau. Mr. Dupuy was asked to comment upon his duties and how they fit into the Field Committee picture.

Dupuy started by stating that he expects there will probably be some ten Field Committees before we are through. There are five

now. He acts as a special assistant to the Assistant Director and also assists the Director on program planning. One of his jobs is to keep the Director informed on what is going on in planning and to visit and contact people in the field and to know who's who and what's what there. In Washington he serves as liaison with the Regional Directors on matters pertaining to programing, the Field Committees and the Program Staff. The Bureau of Mines hopes to have its program planning and its budgeting eventually to the point where they are entirely related and consistent. Budgeting and programing within the Bureau, as in all the other agencies, has been on too much of a hit or miss basis and we all have a job to do in improving this situation. He concluded by saying that it is his hope and the hope of the Director that they will come up with a better program all the way through. The Chairman thanked Mr. Dupuy and stated that he knew they have been making such progress.

(b) National Park Service:

The Chairman then introduced Mr. Ben Thompson and asked him to comment briefly on the Service's recreation planning and its relation to programing. Thompson explained the purpose of his visit to Alaska and how he hoped it would benefit our programing relations. He outlined the Service's recreation planning functions and showed how they entered into long-range programing considerations. The Alaska Recreation Survey being conducted by Collins was commented upon. In addition to pointing out what the Service should be doing in the region, such a survey also indicates what others should be doing.

(c) Geological Survey:

The Chairman reported that on his recent visits to Washington and San Francisco he had learned a great deal about the programing operations of the Geological Survey. Their approach to programing specific projects and investigations appears to be through a series of general reconnaissance surveys of an entire region which then serve as a basis for a selective programing of specific detailed investigations in areas which appear most promising from the initial "go-arounds". He thought the other members would be interested in hearing about this process in more detail and therefore had asked George Gates to present a statement of the methods used by the Survey in programing its geologic investigations. Gates presented such a statement (see Appendix A).

(d) Alaska Road Commission:

The construction agencies are more familiar with the programing process because of the nature of their operations and the Chairman suggested a review of the Alaska Road Commission's programing. A revision of their six-year report had been made as of September 15, 1952

and Niemi distributed copies to the meeting and discussed the changes from the last edition, the progress to date on the paving programs and the construction of the Denali Highway from Paxson to McKinley. He discussed how the programming of the farm roads was coordinated with the Bureau of Land Management's land planning work and the Department of Agriculture and pointed out the dependence of the Alaska Road Commission upon the engineering and map services of the Geological Survey in the planning of new road routes.

Lorain said that in looking over the list of projects he noted that certain roads which he felt were urgently needed were not even listed while many other road projects, which could be only of special local interest, were included. He felt very strongly that there should be more adequate access roads to coal mining areas in the Railbelt and that such roads should be given a high priority on the Alaska Road Commission program. In particular, a road connection between the Denali Highway and Healy and on toward Lignite Creek was needed for two reasons: (1) to serve as an alternate route for moving coal in the event the railroad is inoperative during an emergency period, and (2) to ease acute personnel turnover by giving the three hundred persons living at Healy a road connection with the main highway system. Collins agreed that the employee family morale problem was a serious one in an isolated mining community and that the road connection was of great importance. Saarela asked if the railroad was making a survey for the construction of a spur into these areas this fall. Hinman said that there had been some delays due to the question of whether the connections with the Railroad should be roads or spurs. Hinman also said that he had under consideration a proposal for the construction of a road as far as the Usibelli mine. Usibelli is anxious to make the connection and has money to pay its share of the construction costs.

Returning to the discussion of further northward extensions of the Paxson-McKinley road to Healy, Collins asked what were the possibilities for road locations either up the Savage River or the Nenana River. Johnson said it would be preferable to keep away from the Railroad line from Reclamation's standpoint. They will need roads to serve the transmission lines in connection with their proposed Susitna Basin hydro-electric development. However, if transmission lines are too close to the Alaska Railroad communication lines there could be serious interference with communications. It would be advisable for Reclamation and the Alaska Road Commission to closely coordinate their planning of locations for roads and transmission lines.

In view of the need for adequate access roads to coal areas, the Chairman asked that the following resolution be considered by the Committee:

"The present revision of the Alaska Road Commission's

six-year program makes no specific reference to roads in the Healy River and Lignite Creek areas. If these are not included under Farm and Industrial Roads for construction they should be included at the top of the list of new projects in 1954 budget presentation."

The resolution was unanimously adopted and Niemi agreed to take it up with Mr. Chiglione by phone from Fairbanks so he may carry it back to Budget hearings in Washington October 1, 1952.

Availability of Basic Data to the Public:

The Chairman read a letter from Joe Flakne concerning the failure of the Department to make known to the general public the type of information they have available that the city officials and construction people in Fairbanks were planning to carry on some investigations of permafrost in the area not knowing that the Geological Survey office in town already had the information they were seeking. The Survey has learned of the City's needs and is taking steps to assist them, but Flakne said this is typical of what happens when the public is not aware of what the Department has to offer them on their problems. Following this suggestion, the Chairman said he had requested a few of those present at the meeting to report on the type of material they had available for general distribution and how it was being made available to the public.

(a) Geologic Data:

George Gates was asked to report on the Geological Survey's recent moves to improve their contacts with the public in Alaska and increase the general use of their facilities and information. Gates started by describing the type of releases, circulars and technical papers the Survey published for general distribution to the public. The availability of much of this important and valuable data is often delayed for considerable periods of time after it is assembled because of the requirement that before release there is assurance that the Survey's high professional standards are preserved. A recent innovation which makes data quickly available and at the same time does not weaken the standards of the Survey's published works is the "open files" procedure. This permits interested persons to have access to the preliminary findings and reports on certain areas or resources under investigation before publication. Another innovation which should make the wealth of data already collected more useable is the preparation of a comprehensive index of all writings on Alaska geology and geologic areas. The card index which is nearing completion in San Francisco will occupy several large file cases and cannot therefore be reproduced as a publication. Eventually duplicate copies of the index will be made and will be located at Juneau, Anchorage and Fairbanks as well as at San Francisco. Finally, Gates

referred to a program of re-issuing old out-of-print publications of the Survey. This would not be merely a reprinting job, but the old reports would be re-examined in the light of subsequent investigations and knowledge and revised to be of greater current use.

(b) Maps:

The Chairman commented upon the importance of maps to all types of government and private planning and development. He asked Earle Fennell of the Topographic Division to give a statement on the types of maps now available on Alaska and how they can be obtained. Fennell discussed the mapping work of his division and the problems faced in giving the results of their work the widest possible distribution and use. (See Appendix B for statement given). He concluded by saying that he considered it a privilege to attend field committee meetings. They were of great value to him as he learned a great deal from the discussion which made it possible to better shape the Survey's programs to the actual needs of those people carrying on the research and development programs in the regions.

(c) Fisheries Statistics:

The Chairman said that another agency which gathers a great deal of basic data and information of general interest is the Fish and Wildlife Service. Unfortunately the value of this data was considerably weakened in the past due to the long delays in its compilation into useable form and its eventual publication. The published data was generally not available until several years after the season covered. This problem has been of concern to the Service and recently innovations have been made in the gathering and processing of these statistics which should make them more readily available. He asked Baltzo to review these developments for the Committee (see Appendix C for statement).

Forest Management and Fire Control:

The Chairman quoted from a rough draft of comments prepared in Washington on the Paley Commission Report dealing with the omission of a discussion of the role Alaska resources could play in the Nation's materials picture. The comments dealt with Alaska's timber resources and particularly the urgent necessity for adequate control of fires in Alaska. Except for members of the Bureau of Land Management staff, the Chairman believed that the Alaska Field Committee and the Department have paid too little attention to the importance of fire control in the interior of Alaska and he had asked Roger Robinson to prepare and present a statement on his forest management and fire control programs. Following the presentation by Robinson (see Appendix D) there was general discussion of the importance of preservation of the Territory's vegetative cover to the various bureau programs. Niemi recalled

certain burned areas which have grown up in birch, poplar and willow and now support considerable wildlife and asked if a systematic program of controlled burning of stunted spruce and frozen ground would not be beneficial in many areas of Interior Alaska. Robinson said that BLM had some limited experience with controlled firing and hoped to carry on further experiments. Under proper conditions it could prove very beneficial, but would require considerable preliminary study. The Chairman said that Dr. Leopold of the Conservation Foundation had discussed with him the importance of fire control on tundra and range areas to the continuance of caribou and other big game in the interior and Arctic. Robinson agreed that the slow reproductive rate of tundra cover had serious effects upon the survival of this game. He also added that the course of migration of caribou and sheep is effected by active fires and recently burned areas and cited evidence of the recent migrations of caribou over tremendously large areas apparently in attempts to avoid these blighted regions. Rhode expressed great interest in Robinson's comments on the effects of fire upon wildlife and agreed with his general conclusions. He added that the Fish and Wildlife Service was most willing to assist BLM wherever and whenever possible in its fire detection and suppression work.

Susitna River Basin Report:

The Chairman noted the status of the Susitna River Basin Report, which was that the Bureau of Reclamation had furnished copies of the first draft to Interior agencies in Alaska a few days prior to the meeting then in progress and had requested written comments within thirty days. The Chairman, further, indicated his understanding that these comments would be considered by Reclamation's District Office prior to its submission of the report to the Commissioner of Reclamation in Washington. Johnson stated that the report was tentative and that changes would be made in the light of written comments received. The Chairman then asked that each Field Committee member furnish him a copy of comments submitted to Reclamation in order that he might duplicate all of the comments and send a complete set to each member. By this means each member would have a chance to study the comments of the others.

Collins opened the general discussion by stating that he thought the report was good. Rhode stated that he was encouraged by the report because it did indicate that the Bureau of Reclamation was aware that values other than the power development potential were involved. He added, however, that the report states that it is a comprehensive plan for the development of water resources, which he did not think it was as it now stood. Rather, it was a comprehensive plan for hydro-electric power development. Rhode did not know how much chance the other bureaus had had to study the report. He thought, however, that it contained a good deal of information and that probably

it was fairly accurate. Johnson said that there were bound to be some inaccuracies, and he emphasized that the report was not final in any way. He referred particularly to Chapters 1 and 6 as evidence that the door was wide open for everyone else to contribute in every way possible. What the report did was point out a program to be carried out over a period of years. The Chairman agreed that the report represented a very encouraging and refreshing departure from previous reports of its kind with which he was familiar. He cited page 20, on which it is specifically stated that alternate uses of the water resources of the Susitna River Basin will require further study before any plan for development can be mutually accepted. The Chairman further stated that he was able to trace this same general tone throughout the report. He felt that certain portions of the report were weak or inaccurate, and these he would deal with in his written comments, but on the whole he thought that an excellent job had been done.

Reed regretted that he must still question the representation of this River basin report as a report of the Department of the Interior; he still believed that it was a report of the Bureau of Reclamation. He did not feel that he could be a party to statements made in the first 20 pages, for example. He pointed out that the title sheet stated that this was "A Report . . . by The United States Department of the Interior". Goding said that this was not even the report of the Bureau of Reclamation as yet. Actually, it was a tentative report of the District Manager. Johnson stated that this point had been discussed at length at the previous field committee meeting and that to him it was still a Departmental report. Trimble interposed that it was a proposed report, and he agreed that it shouldn't be called a Department report at this stage. Reed stated at this point that he questioned some very basic things in the report. We did not, for example, know what the cost of energy would be if it were produced by coal. The Chairman suggested that this type of criticism should be made in the written comments on the report, rather than discussed in detail at this meeting. He said, for example, that he thought the chapter on marketing was weak, that he intended to go into it in the written comments in great detail and that he was sure that Reclamation wanted the other agencies to do the same and be honest in their comments. Johnson agreed that Reclamation did.

The Chairman continued, stating that the concensus seemed to be that the Basin Report was still a Reclamation report, although he felt that there were strong indications beginning in Chapter I and continuing throughout the report of its preliminary nature, particularly respecting recognition of the fact that the values of other resources in the basin were not known. To the Chairman it was quite something to have that happen. Reed agreed that those things were all good. He was very thoroughly convinced, however, that now was not the time to get excited about the Susitna Basin. Until his bureau reached the thinking that this was an important priority, there were a lot of fish to fry elsewhere. He did not wish to have to modify Survey

priorities simply because the basin report was called a Departmental report. Johnson replied that the Geological Survey had a right to state this point of view in its written comments. Reed then said that if the report is called a Reclamation report the Geological Survey would be as cooperative as possible in supplying the deficiencies. The Chairman suggested that the change of only a few words would help to make the report more acceptable.

Trimble asked whether general statements were in order. Upon being assured that they were, he suggested that members of the Alaska Field Committee might wonder whether the \$900,000 proposed in the basin report for Devil Canyon investigations would be used to make a report which determines (1) if the project is feasible or (2) that the project is feasible. Johnson, in reply, said that project investigation funds are used to determine the engineering and economic feasibility of a proposed project.

The Chairman asked when the present report, prepared in the District Office of the Bureau of Reclamation, would become the Secretary's report. Johnson replied that when it is agreed to at the field level and when the Washington level reaches an agreement, the report becomes a Secretary's report. Baltzo wished to know whether there would be further opportunity to comment at the field level, whereupon the Chairman stated his feeling that Morgan and Johnson had demonstrated their good faith on that score. Collins, too, felt that he was not necessarily committed at this stage. In reply to Rhode's comment that it takes quite a while to get the necessary facts and figures Johnson stated that during the next three years investigations would be concentrated on the proposed Devil Canyon dam site and that until the project investigation is completed it will not be known whether the project is feasible or not, even though the basin report indicates a strong possibility that the project investigation will reveal feasibility. In any event, there would be at least three years in which to come up with answers on fish and wildlife and other problems. Each interested agency of the Department would make a contribution to the Devil Canyon report.

The Chairman was concerned about the means by which the other agencies might get the necessary investigation funds. Johnson explained that Chapter VI of the basin report is set up in such a way that each agency should get specific money for a specific investigation job, provided that each agency included the item in its submission to the Bureau of the Budget. The amount that each agency needed for investigations and intended to submit to the Bureau of the Budget would be included in specific dollar terms, by agency, in the final draft of the basin report. Reed said that this would mean, in other words, that Reclamation is willing to show in the basin report the total estimated cost of the project investigation for all agencies of the Department. In reply to Reed's comment that if the Survey requested funds for Susitna investigations, their other work would be cut

correspondingly, Johnson did not think that the other programs of the bureaus would be hurt if they received specific money for Susitna Basin investigations.

The Chairman felt that the only way to get balance between conservation and development programs was to present budget requests in package form, particularly in cases where large amounts of funds would be requested to justify the power phases of given projects. So far as he knew, this was still the adopted policy of the Department, but, until package budget requests for a project become acceptable to the Bureau of the Budget, he thought we were lost. Reed suggested at this point that perhaps the Bureau of the Budget could be approached on a coordinated basis when the Bureau of Reclamation presented its \$900,000 request for Devil Canyon investigations. Johnson, while he did not disagree, was inclined to think that this approach was the responsibility of the individual agency concerned and not of the Bureau of Reclamation. He cited the fact that on page 103 of the basin report, under Future Investigations, the National Park Service had set down certain amounts of money needed for Susitna Basin investigations, and he felt that the Park Service could submit its own request for these funds to the Bureau of the Budget. Collins explained that the estimates of the National Park Service cited by Johnson were those that had been worked out for the Field Committee's six-year program report and had been agreed to by the Washington office of the Park Service as acceptable for the six-year report. Nevertheless, the estimates were budget figures and not to be taken lightly. At the time an estimate in the six-year program was formulated a bureau might think it wouldn't get any of it, but the procedure gave the bureau an opportunity to ask for funds. The weight of the Field Committee was behind the request, and Collins felt that it would be wrong not to take advantage of the opportunity. The fact remained that the Park Service did not get money every time it asked for it. Pursuing his discussion further, Collins made it clear that he did not think that the Bureau of Reclamation should stop work just because the Park Service was unable to get money. He thought, rather, that someone along the line in Congress, in the Department, in the White House, or wherever there is authority, will have to take an interest in problems of budgetary coordination and see that the job gets done. He added that a package submission was perhaps one of the best means of forcing someone to make an analysis. Thompson said that he didn't think the Department had been given the answer to problems of budgetary correlation, and he thought it proper for the Field Committee, for one, to keep trying for a package submission. Lorain thought that this was the only answer, and suggested to Reclamation that if they wanted a Departmental report they had better get money for the other bureaus. Collins said that Reclamation had always been willing to try, and that the difficulty has been with the Bureau of the Budget.

Rhode, reiterating his earlier stand, wanted to know why Reclamation didn't assume responsibility for its report, provide funds

for related investigations, and then call the resulting report a Departmental report. The whole point as he saw it was that the Susitna Basin Report was not a water resources study at all. If the Department wanted to make the report a water resources study rather than a hydro-electric study, it was within its power to allocate ceilings in such a way as to make this possible. In the case of the Fish and Wildlife Service Rhode was reasonably sure that with things as they stood the budget would be set and the ceilings would be set and there wouldn't be a dime for the Susitna River Basin.

Following general discussion the Committee concluded that a statement summarizing the conclusions of the session would be in order, and the Chairman asked Reed and Collins to formulate such a statement. They submitted the following, which was approved by the Committee:

1. In giving recognition in its text to the importance of other resources and water resource uses in the basin and the need for greater investigation effort in all sectors before the form, extent and nature of development of water resources can be finally determined, the Report represents an important step toward comprehensive and balanced treatment.

2. As the Report now stands, however, the AFC feels that it is a misnomer to label it a "A Report on the Potential Development of Water Resources in the Susitna River Basin of Alaska, by the United States Department of the Interior." The Report is based upon the investigations of the basin's hydro-electric potential by the Bureau of Reclamation which have been carried on for a period of three (3) years with an expenditure of \$250,000 of investigation moneys, and the comments of other bureaus of the Department which emphasize in most cases the lack of any investigation by them. It is recommended, therefore, that the present report be considered as a report of the Bureau of Reclamation on the hydro-electric potentials of the Susitna River Basin.

3. As to the formulation of a truly Departmental report, there is need to assure that investigation and study of other resources and other water resource uses are granted the means to catch up with the hydro-electric investigations. The present method of seeking funds on a bureau basis has not and will not accomplish this purpose. When the Department, the Bureau of the Budget and the Congress are considering the granting of investigation money to the Bureau of Reclamation, they should at the same time consider the granting of the funds required to carry out the related investigations by other functional bureaus. To treat these as separate and unrelated items will only serve to accentuate the present imbalance in the basin investigation.

The Taiya Project and Its Implications for Departmental Programing:

The Chairman opened the discussion by saying that he had included the Taiya project in the preliminary agenda not because he intended at this time to get into a discussion of Alcoa's recently announced plans or the hydro project itself, but because of the general resources of the area and the possible effects of such a development on these resources and our programs in the area. He asked George Gates to tell the committee something of what the Survey knew about the mineral resources in the Klukwan, Haines, and Skagway areas. Gates replied that he thought the Chairman was referring particularly to the iron ore near Haines or Klukwan, which all of the committee members had already heard something about. Some prospecting was done during the past season and some drilling has also been done. There is a large volume of rock which contains magnetite, but the greater portion of this is relatively low grade iron ore, containing probably less than 20% magnetic iron. However, there is some high grade. Lorain added that it seemed to be running around 40%. Continuing, Gates stated that there are large limestone deposits near Klukwan and very large deposits of limestone on islands off the west coast of Prince of Wales island. Available information indicates that at least a considerable part of the latter deposits are of high priority, 95 to 98% calcium carbonate. In southeastern Alaska there are large reserves of nickel deposits on Yakobi Island and some near Juneau. These reserves are relatively low grade. Deposits of zinc and lead ore of significant size are known in the Wrangell and Ketchikan areas, but this is not particularly high grade ore. It contains several percent of zinc and a few percent of lead. Gates reported, in conclusion, that Bill Twenhofel had prepared a report on the various types of mineral resources in Alaska that might be used in the development of electro-chemical and electro-metallurgical industries in connection with the Taiya project. This report will be put out as quickly as possible in circular form.

Lorain agreed with Gates' resume of the known mineral resources. He then raised the question of whether there would be any power left over for other things when Alcoa got through. He felt that some provision should be made for this. One reason was that the Bureau of Mines thought that the Klukwan iron ore reserve compared favorably in potential tonnage with the reserves of magnetic taconites in the Lake Superior iron districts. One item in favor of Klukwan ore is that it needs beneficiation to only 40-50 mesh while Mesabi taconite requires a fineness of 200 mesh to remove the iron. However, Klukwan iron ore has the disadvantage that the titanium content would be troublesome if the usual smelting methods were employed. The titanium content would cause no trouble in electric-furnace smelting. Therefore, the availability of low-cost Taiya project power could be a deciding factor in whether the Klukwan ore can ever be developed. Johnson added that to his knowledge the Yukon-Taiya project is the only exceedingly low-cost and large power site within transmission distance of Klukwan. Reed stated emphatically that the Taiya tunnel should be big enough for full development, and he thought the Govern-

ment should insist on it. The Chairman reported that Mr. Hickman, Vice President of Alcoa, had said in his McKinley Park announcement that surplus power would be available. Niemi stated that Mr. Hickman had not mentioned the probable availability of surplus power for uses other than aluminum production in his Juneau speech, and the Chairman agreed that he had not specifically done so in his second speech. Goding, however, pointed out the fact that the Juneau speech had described the Taiya project as a two-stage development, indicating at least by implication that surplus power would be available after the initial needs for aluminum production had been met. Conceding that the Alcoa announcement was open to various interpretations, the Chairman added that so much attention was currently being directed to the Taiya project that further developments should be watched very closely.

Respecting development possibilities for other minerals in the area, Lorain said that there is an important nickel-copper-cobalt discovery near Burwash Landing in the Yukon Territory that may require Taiya power for ore refining at tidewater near Haines. Presuming they put in a plant and put it at tidewater, which is by no means certain, it might make a big difference in the exploitation of our low grade minerals in southeastern Alaska. In other words, if the smelting and refining plant to process Burwash Landing ore is at tidewater southeastern ores might be handled in the same plant. Johnson stated that the plant would be somewhere between Haines and Burwash Landing, depending upon the economics of transportation. The plant would require tremendous quantities of ammonia, and they don't know where they will get the ammonia. In the meantime they have filed on some coal lands over in the Donjek country, and they might make ammonia out of this coal if low-cost power can be developed at Lower Canyon, White River. No one will have the answer for a period of several years.

Returning to the subject of Taiya, Johnson said that one of the most important accomplishments in the past was the preliminary industrial plant site investigation of the area from Juneau north to Skagway that was made by the Geological Survey in connection with the Taiya project report about two years ago. Reed reported that he had asked Arthur Johnson to give top priority to his report on industrial plant sites, and Johnson added that much will depend upon what the Geological Survey finally finds concerning some of these sites. Robinson stated that the Bureau of Land Management and the Soil Conservation Service had two men in the area at the present time making a very rough preliminary reconnaissance survey as to the potential agricultural lands not far from Haines. This would be in the general area of Alaska involved in the Taiya project plans.

In the judgement of the Chairman the consensus was that the potential value of the resources in the Taiya area susceptible to development by means of hydro-electric power was sufficiently great

to warrant every possible effort that might help insure the availability of surplus power from Taiya for such development. The Committee agreed that the matter was of such importance as to justify a separate statement to the Secretary's office and continued investigations by all Interior agencies concerned.

Susitna Flats Withdrawal:

The Chairman read the announcement on the withdrawal of land in the Susitna flats area for use as an anti-aircraft firing range. The provisions of the withdrawal order were discussed. Reed suggested that further alternative sites should be sought. Rhode listed alternatives considered in the course of the hearings. Areas on the Anchorage side of the Turnagain Arm were discarded because of conflict with C.A.A. operations. The north end of the Kenai Peninsula was suggested as the extreme impact area with most of the firing over open water. The Fish and Wildlife Service had no objections to this alternative because the impact upon the Refuge would be very minor. The Fish and Wildlife Service had no objection to the Susitna flats withdrawal, the objections coming from local citizens believing that Anchorage eventually would be expanding into that area. Goding said that the reduction of the period of the withdrawal from 5 years to 3 years with provision for hunting in season should eliminate any real objection to the withdrawal.

Chugach National Forest Elimination:

The Chairman read a proposal from the Office of Territories recommending the elimination from the Chugach National Forest of land to the west of Longitude 148° 45'. This recommendation was based upon the belief that the area to be eliminated has no important commercial timber value, is more an agriculture and recreational type area, that the Bureau of Land Management is better prepared to manage such land and that the elimination would simplify the administration of the Alaska Railroad and the Alaska Road Commission. Goding said that such a proposal has been under discussion for about fifteen years. Robinson said that the area had a fire problem comparable to that in other areas administered by the Bureau of Land Management; that there was little timber in the present Kenai portion of the National Forest, and that its major potential was a recreation area. In this connection, he pointed out that the citizens of the Anchorage area were quite pleased when the Regional Forester, Forest Service, several months ago established a policy for the Kenai wherein its major use was set for recreational purposes. Niemi said that one immediate result would be the combination of road construction and maintenance operations, now performed by two agencies in the area, with resultant economies. Rhode suggested that if the purpose was largely toward simplification of administration of road programs that only the road right-of-way be

eliminated from the National Forest, Collins asked that the letter from the Office of Territories be duplicated and comments solicited from the members.

Administrative Committee:

The Chairman reported that proposals for the establishment of an Administrative Committee were still under review at the Washington level and that they would be referred to the Field Committee at a later date. The Chairman outlined the proposals under discussion at the time of his Washington visit. Reed said that the establishment of an Administrative Committee separate and distinct from the Alaska Field Committee was still wrong in principle and would only create complications. He stated that administration has effects upon programing and vice versa and suggested that the present Administrative Sub-committee be continued. Collins agreed that the Administrative Sub-committee should stand.

Right-of-Way Sub-Committee:

The Chairman reported on the meeting of the right-of-way sub-committee composed of Barber (BLM), Riley (APW), Delaney (ARR) and Adams (ARC). They have not prepared a final report as yet but have held one meeting at Anchorage and had a considerable exchange of correspondence. The sub-committee has considered two matters: (1) the status of public land Order 601 which establishes the width of road right-of-ways and management, and (2) a proposal to make provision for administrative determination of widths where sections of road were previously established at less than 100. They also discussed the matter of providing use permits for sites within rights-of-ways.

As a by-product of their discussions of right-of-way matters they discovered lots of other problems pertaining to land matters. Therefore, they may propose that the sub-committee be expanded in authority or another new sub-committee be established which would treat land problems in general, and in particular the problem of community development and planning activities. They also suggested that some study be made of land titles, a problem that has serious effects upon settlement and development in the Territory. The Chairman concluded by saying that this was the essence of the comments which he got from a brief meeting with the sub-committee secretary and is not to be taken as the final report. Rhode asked if the whole matter of right-of-way widths would be re-opened again. He also asked if the sub-committee didn't have to do only with highways, or was it directed to discuss such things as roadside parks, access to lakes, etc. Collins said the Chairman's report left him a bit confused. He thought one of our very primary responsibilities was watching this

land business. To create a proper sub-committee it would be necessary to include all the Field Committee members, so why do it. The Chairman agreed with this sentiment, but added that he was just reporting on some of the ideas being discussed by the sub-committee.

Public Relations:

The Chairman read a letter from Joe Flakne in which he suggested certain things which we might discuss at the Field Committee meeting, among them giving consideration to a publicity program. He stated that one other Field Committee -- Pacific Northwest Field Committee -- had such a program under consideration for a long time, and were planning to prepare some sort of a public relations document. The Chairman asked for the members' views on this, stating that for himself he felt he should definitely steer away from using the Field Committee as a promotional office or a public relations office. He felt his primary job is one of relations with the bureaus within the Department. Lorain agreed, adding that he thought the best public relations is what we do from day to day. Rhode agreed in general but asked what we were going to do to counter the continued attacks we were subjected to by local politicians and by certain employees of the Department itself. The Chairman also felt this was serious and suggested that this was something Joe had in mind when he proposed a public relations program. As to attacks by employees of the Department upon the Department, the Chairman agreed that such criticism of the Department should be kept within. Rhode added that it has hurt all of our operations. It hurts particularly to be discredited by people who are paid by the same Department. Collins stated that there has been some loose talk perhaps but this is a political year and we should not worry too much.

Wade asked if the Secretary's office had a public relations man who could concentrate a little bit on our problems. The Chairman thought that the publicity matter is something we will have to work out for ourselves. Wade argued, however, that we need money so we can hire a public relations man. Collins felt the problem was just a little bit different from Wade's notions. It isn't a matter of having someone in the office to write press releases, but a matter of creating trust and integrity. Rhode agreed that Wade had brought up another problem. The only value of a public relations man would be his skill in writing up things that others have prepared. It must be more than just a publicity sort of thing if it is going to be of any value. Spending money and effort on the operation of a publicity re-write organization won't get our programs across at all.

Responsibilities Under Antiquities Act:

For the general information of the members, the Chairman dis-

tributed copies of an exchange of correspondence between the Secretary and the American Anthropological Association on the matter of preservation of ancient villages and historic sites on public lands. He also distributed a copy of the Antiquities Act of 1906 and reviewed the Bureaus' responsibilities under it. Collins reported that a contract has been approved between the University of Alaska and the National Park Service for some archaeological survey work in the Susitna Basin. He said this is the second such agreement and understanding they have made in Alaska, the other being in the Arctic with the Office of Naval Research. He concluded that they look forward to having some similar relations with the University in other places in the Territory. This one involves only \$1,000 and the University is putting up some money too.

Territorial Park System:

Collins re-opened the subject of the need for a Territorial Park System and a general discussion followed as to how this should be promoted other than directly by the Field Committee. The Chairman distributed copies of a bill introduced at the last session of the Territorial Legislature for the creation of such a commission and suggested that the members study it and seek means of getting others outside the Department interested. The Chairman read a recent editorial on the subject appearing in the Anchorage Daily Times and entitled "An Endowment is Being Squandered". He said this was the type of campaign which would educate Alaskans as to the need for such legislation. Robinson said that because we are still a new country people tend to overlook the crucialness of the problem. He cited the difficulty the Bureau of Land Management has had in finding any remaining non-private lands around the lakes in the Anchorage and Fairbanks areas to dedicate to public use. The Chairman asked Robinson for a statement as to the Bureau of Land Management's policies in regard to recreational use of public lands. Robinson agreed to submit a copy of the official position of the Bureau which the Chairman would attach to the finished minutes of the meeting (see Appendix E).

Operation of the McKinley Park Hotel:

The Chairman suggested that while the Field Committee was meeting at Mt. McKinley Park it was proper to look at some of the problems that were emerging in the area, and he asked Roy Hinman to describe briefly the results of the invitation for bids for a concession to operate the Park Hotel and other public service facilities at the Park. Hinman reported that the bid proposals had been put out in June. They had been worked out in cooperation with the National Park Service with the thought that any final development should generally cover other facilities in the park as well as operation of McKinley Park Hotel. It has been thought there would be wide interest

in the invitation for bid proposals, since there has been a good deal of talk for a long time that the National Park Service should be operating the hotel rather than the Railroad. The prospective concessionaires were given about three months to study their investigations, and four proposals were received. One is a cost-plus proposal, two say only that they are interested in discussing the matter, and one individual has made a very definite proposal. His financial ability to carry out what he offers to do is now under investigation. Hinman then described this proposal as submitted by the bidder and added that the National Park Service and the Railroad have transmitted this information to their Washington headquarters.

Collins added that a very determined drive had been made to find a suitable concessionaire. Several hundred copies of the invitation to bid were sent out to addressees ranging from hotel supply concerns to Members of Congress. Although the responses had not been great in number, he thought that a bidder qualified to supply and maintain the wide variety of facilities needed in the Park may have been found. Hinman stated, by way of conclusion, that if there was to be an expansion of facilities such that McKinley Park would be made more attractive to the traveling public, some highway financing might also be needed. He added that the Alaska Railroad has operated the hotel because the Congress told them to, and he foresaw the possibility that the Congress would soon indicate that the Railroad should confine itself to railroad operations.

The Department in Arctic Alaska:

The Chairman stated that for the past few years more and more attention and research effort on a wide front have been directed toward Alaska's Arctic. Several of the Alaska Field Committee members have been directly or indirectly involved in these programs and the Chairman thought it would be of general interest and value to have three members who have been most intensively involved in such surveys conduct a panel discussion of the Arctic region and the Department's responsibilities and future programs there. Reed led off with a history of Naval Petroleum Reserve No. 4, the various agencies involved and the complicated organizational structure which ties all of them into a coordinated team. He also described the development of the Office of Naval Research's Arctic Research Laboratory at Pt. Barrow and the possible future of this organization. Into this discussion he brought the activities of the Geological Survey within the Naval Petroleum Reserve and the spread of these investigations beyond the Reserve into the Arctic in general. The employment of Eskimos on the Navy projects and possible future readjustments following the cessation of activities were discussed. Rhode reviewed the Fish and Wildlife caribou and sheep surveys and predator control programs in the Arctic. Theories of the Service on the nature of the migration and life history of these big game species were outlined and the im-

portance of these resources to the Native economy and as an emergency food source in the event of an Arctic war were noted. Collins concluded the panel discussion with a general presentation of the total value of the Arctic not only from the mineral and game standpoint, but from the point of view of aesthetic interest. He stated that the northeastern corner of Alaska combines perhaps the most varied combination of Arctic characteristics to be found anywhere in the world.

* * * * *

Attachments

GEOLOGIC MAPPING IN ALASKA

by George O. Gates, Chief, Alaskan Geology Branch, Geologic Division,
Geological Survey, San Francisco, California

Most of the geologic mapping in Alaska has been focused on the evaluation of mineral resources; i. e., it has been aimed toward determining where minerals may be found and toward determining order to magnitude of reserves of known deposits. Geologic mapping with these objectives is now centered mainly in the Alaskan Geology Branch and it is this type of mapping with which this paper is concerned.

Past and current geologic mapping focused toward evaluation of the mineral resources of Alaska falls roughly into three phases, reconnaissance mapping at scales from 2 to 8 miles to the inch, semi-detailed to detailed systematic mapping at a scale of about 1 mile to the inch, and large scale mapping, less than 500 feet to the inch, compiled for relatively small local mineralized areas. The third phase of mapping, needed in determining the nature and extent of individual deposits, totals a relatively very small amount composed to the area of Alaska and is not considered in the following discussion. This third phase is a very important one, however, and one to which a large share of our effort has been devoted since 1940.

The reconnaissance mapping phase obtains initial exploratory information on the kinds, distribution and relations of rocks present. Such mapping gives indication of the potential of an area for mineral resources and roughly delineates the more restricted areas that warrant systematic mapping at a larger scale to evaluate more fully the mineral resources and potential for mineral resources.

Though much has been accomplished in the period of more than 50 years that the Geological Survey has been engaged in geologic mapping in Alaska, the task that remains is still very large. More than 40 percent of the Territory is still unmapped geologically. The amount accomplished, however, is particularly remarkable when we consider that before 1940 the work was carried out by only a few geologists annually in an area of nearly 600,000 square miles.

Though reconnaissance mapping of a geologically unknown areas reveals information about the potential for minerals, a second phase, semi-detailed to detailed systematic mapping is needed for the more favorable areas to evaluate more fully the actual and potential mineral resources. For example broad scale reconnaissance mapping may demonstrate that a large area is underlain by a thick sequence of sedimentary rocks of marine origin. The area is then known to be one in which there is a possibility for the occurrence of oil. However, systematic mapping at a larger scale, one mile to the inch or larger, is needed to adequately determine the potential for oil. Such questions must be answered as, are reservoir rocks present? How thick are they? In what part or parts of the sequence do they occur? Are favorable structures present that could act as traps for the accumula-

tion of the oil into local areas? Locally mapping at a scale greater than 1 mile to the inch may be needed to answer some of these questions.

Coverage of published mile to the inch mapping in Alaska is strikingly meager. It totals less than 5 percent of the territory. The task that remains for this phase of mapping is even greater than for reconnaissance mapping. I do not mean to imply, however, that all of Alaska should be mapped at a scale of 1 mile to the inch. The gain would not be worth the cost. But the need for geologic maps at this scale includes large areas in Alaska, areas known or believed to be favorable for the occurrence of minerals. Mapping at this scale is also needed in rapidly developing parts of Alaska to determine sources of construction materials and to furnish geologic information useful in the selection of more favorable sites for construction such as routes for highways.

Except for a few omissions which I will mention later, I have very briefly sketched the status of published geologic maps on Alaska. Next I will consider geologic mapping completed within the last few years and mapping now in progress by the Alaskan Geology Branch. For the past ten years funds, personnel, and priorities for other work have permitted only one field party annually on reconnaissance mapping. This work has all been in the lower Kuskokwim region. The northeastern part of the region between the Holitna and Aniak Rivers, an area of about 8,000 square miles, has been mapped and a Professional Paper is in process of publication. About 10,000 square miles has been mapped of the southwestern part, an area of 12,000 square miles, bounded roughly by the Kuskokwim and Aniak Rivers and by Bristol and Kuskokwim Bays.

For the past several years much of the effort has been on systematic mapping at a scale of about 1 mile to the inch or larger in areas selected for their mineral potential. This mapping can be classified on a commodity basis and the emphasis has been on fuels. In connection with coal investigations in the Railbelt mapping has been carried out at a scale of 1 mile to the inch or larger and has centered in three areas, the southern half of the Kenai lowland, the northern part of the Matanuska valley north and west of Palmer and a belt along the north side of the Alaska Range for 130 miles from the Savage River on the west to Jarvis Creek on the east. The specific objective is to determine the reserves of coal, i.e., to delineate individual beds, measure their thickness, determine their attitudes and relations to enclosing rocks and insofar as possible calculate the tonnage. Pending final publication much of the results of the work on coal has been made available in preliminary reports.

Semi-detailed to detailed mapping has been carried out and is in progress in connection with petroleum investigations in parts of southern coastal Alaska and in northern Alaska. In southern Alaska the work is in two areas, the Gulf of Alaska Tertiary province extending 300 miles from the mouth of the Copper River to Icy Point and the Alaska Peninsula-Cook Inlet province which extends from Herendeen Bay northeastward to the Nelchina area. Mapping of the Alaska Tertiary province is well advanced. It is nearly completed in the Katalla and Yakataga areas and the whole

province will probably be completed in two more field seasons. Much of the mapping has been at a scale of 1 mile to the inch. Preliminary reports with maps have been released to the public. In the Alaska Peninsula-Cook Inlet province mapping is completed for the Chinitna Bay area on the Alaska Peninsula and is now in progress in the Nelchina area. Investigations in this province have been handicapped by lack of mile to the inch base maps.

Petroleum investigations in Northern Alaska have been in progress since 1945 as part of the Navy's program of exploration for oil in Naval Petroleum Reserve No. 4. Funds for the work have been largely furnished by the Navy. Investigations have been carried on within an area of about 70,000 square miles. Much of the mapping has been at a scale of about 1 mile to the inch. Some of the mapping is at a larger scale where very detailed geologic information is needed for selections of the sites most favorable for drilling.

During the past 10 years metals investigations have involved much less systematic mapping at a scale of 1 mile to the inch or larger than fuels investigations. The emphasis has been on examination of local mineralized areas and individual deposits. The geologic maps compiled during such examinations are at various large scales and mainly greater than 500 feet to the inch. Some systematic mapping at 1 mile to the inch or larger scale, however, has been accomplished. This type of mapping has been done in connection with the following metals investigations: (1) Juneau gold belt; (2) northwestern part of Chichagof Island and Glacier Bay; (3) Haines-Klukwan area in northern part of southeastern Alaska; (4) La Touche Island in Prince William Sound; and (5) Willow Creek gold mining district. This totals about 17 mile-to-the-inch quadrangles.

Two other very important types of metals work have involved little geologic mapping, work in connection with Defense Minerals Exploration Administration activities and Trace Elements investigations. The latter is essentially a search for radioactive materials in areas considered to be favorable from geologic information already known.

Construction materials investigations the past few years have centered mainly on individual deposits and local areas and therefore has involved large scale mapping and little at a scale of 1 mile to the inch. To meet the need for information on construction materials the first step has been to determine the nature and extent of known deposits. The next step will be systematic mapping along transportation routes.

In addition to the geologic mapping that has been described and that is now centered in the Alaskan Geology Branch, geologic mapping has been carried out for the past few years in connection with Alaskan investigations by three other organizational units of the Geologic Division. To assist in evaluating the ground water resources the Ground Water Branch of the Water Resources Division has systematically mapped at a scale of mile to the inch about 200 square miles in the Matanuska Valley west of the Matanuska River and north of Knik Arm.

Geologic mapping has been in progress for the last several years in the Aleutian Islands by the General Geology Branch and in other parts of Alaska by the Alaska Permafrost and Terrain Section of the Military Geology Branch in connection with terrain and related military engineering studies. The mapping in the Aleutians is mainly at a scale of 1:25,000. Mapping by the Alaska Permafrost and Terrain Section is mostly at 4 miles to the inch, some is at 1 mile to the inch.

The need for geologic mapping in Alaska is obvious, both for reconnaissance mapping in hitherto unmapped areas, and for more detailed systematic mapping. How much more reconnaissance mapping should be done? I think the answer to this question is simple and most would agree that all of the unmapped parts of Alaska should be mapped at least through the reconnaissance phase. What parts of Alaska should be systematically mapped at a scale of 1 mile to the inch or larger? Though large parts should be mapped at a scale of 1 mile to the inch, the answer to this question is not as clear and any answer will change with changing national needs and with trends in development of the Territory. Factors to be considered in selecting areas for such mapping are: mineral possibilities revealed from reconnaissance mapping and other information, need for geologic information basic to selection of sites for construction and the need for detailed understanding of the geology in certain areas that is basic to the understanding of the geology of other larger areas where evaluation of the mineral resources is the main objective.

As well as a need for more geologic mapping in Alaska there is urgent need for speeding up the rate at which it is accomplished. How can this be done? The answer is not as simple as having more money to hire more geologists for the number of trained geologists is limited. Furthermore a geologist does not attain adequate efficiency until he has had a few years experience working under Alaskan conditions.

We need to look for more rapid methods and techniques for field mapping, in the more remote parts of Alaska. Getting around the country consumes too much of the geologists time. More adequate logistic support is at least part of the answer. Our work in northern Alaska is a good example of how the rate and efficiency of field mapping can be greatly increased by adequate logistic support. With the personnel available the mapping of thousands of square miles since 1945 could never have been accomplished without the weasel and plane support furnished by the Navy.

Use of helicopters is now standard practice in topographic mapping in Alaska. Though the cost of a single geologic mapping party using a helicopter throughout the field season is prohibitive, perhaps the cost would not be excessive if a helicopter was used to support and move from place to place a group of 2-man parties working more or less on a front in the same general area.

The technique of photogeology that has been applied so effectively to the geologic mapping in northern Alaska should be applied to other

parts of the Territory to a greater degree than it has in the past. Photo-geology is now applied by individual project geologists in the areas where they are working. For large parts of Alaska it can be used to good advantage, also, in advance of field work for obtaining information useful in selection of areas to be mapped and in planning more efficient field work, as well as certain kinds of geologic information that can be obtained better from aerial photographs than field mapping.

A very important factor effecting the speed and efficiency of geologic field mapping is the availability of good topographic base maps. The geologist is therefore very glad to learn that topographic maps will become available in increasing numbers within the next few years.

THE AVAILABILITY OF TOPOGRAPHIC MAPS IN ALASKA

by Earle J. Fennell, Topographic Division
Geological Survey, Washington, D. C.

One of the Geological Surveys responsibilities is the preparation of topographic maps of the United States, its territories and possessions. Alaska has figured prominently in this regard for many years. Our first parties came here in 1889, and no other area has generated more intense interest on the part of our people than has this Territory of Alaska. Early mapping was done by combined geologic-topographic parties. The area covered by this mapping were of chief interest to the mineral industry. The maps were made at scale 1:500,000 or 1:250,000 with some mile to the inch or larger scales.

Our present topographic mapping is intended to serve the needs of the many diversified activities that are now found in the Territory. To that end we have developed a scheme or layout of 1:250,000 scale maps (about 4 miles to the inch) covering about 26x29 inches, paper size, and encompass about an average of 6,000 sq. mile of area. 153 of these sheets are required to cover the Territory.

This major layout is divided into 24, or in southern Alaska, 32 parts for which we are preparing or will prepare, 1:63,360 or mile to the inch maps. These maps are the standard topographic series, and will be of maximum use in research and in the planning and development of your engineering projects. These mile to the inch maps are printed on about 18x24 inch sheets and contain an average of about 225 sq. miles of area.

The 1:250,000 scale series of maps are compiled from existing mapping. Thus they contain the early mapping done by the Geological Survey, the later Trimetrogon mapping done during World War II days, the hydrographic charting completed to date by the Coast and Geodetic Survey and any other source of material available. Even with the use of all source material, there are still some considerable areas on these first editions of the 1:250,000 scale series that have had to be left blank. As time goes on and we accomplish more mile to the inch mapping, obtain more complete aerial photographic coverage and extend ground control surveys, these first compiled 1:250,000 scale sheets will be re-compiled or revised and completed in their entirety. Compilation of the 1:250,000 scale provisional series is now complete and over a hundred of the 153 sheets have been printed and are being distributed. The remainder will be coming through in short order.

The 1:63,360 or mile to the inch series is a horse of a different color. These maps must be carefully compiled from scratch and require precision vertical aerial photography, rather extensive horizontal and vertical control and compilation by stereo-photogrammetric methods. In order to accomplish this really complicated process, we arrange with the Air Force and Navy for photography, send engineers up here every season

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for ground control surveys from our Denver, Colorado regional office, and do the compilation, drafting and editing in Denver, utilizing a good part of the 75 multiplexor Kelsh plotting instruments that we have there in that laboratory.

I will roughly outline the areas which we have been mapping for mile to the inch publication since World War II. These areas, by the way, are in line with military defense plans for the territory. The impact of the military defense program is strongly shown in our mapping as it is in many other activities now under way in the territory. Our mapping has largely been along the transportation routes of central Alaska. We have completed a tier of maps along the railroad from Anchorage to Fairbanks, along the highway from Fairbanks to Big Delta, along the Richardson Highway to Gulkana, along the Glenn Highway, Anchorage to Gulkana, and above the newly named Taylor Highway from Gulkana to Tok and also completed the maps covering the Kenai Peninsula. We have controlled and in process of compilation most of the area contained within the rough square formed by the Alaska Railroad, Alaska and Richardson Highway, and the Glenn Highway.

We have also completed horizontal and vertical control surveys on an area in the vicinity of Valdez. This summer we completed control surveys on a photographed area in the Livengood-Steese Highway, Charley River area. Basic horizontal control has been done along the highway from Big Delta to Tok but aerial photography has not yet been completed of that area.

We have completed the compilation of the mile to the inch maps covering the Kenai Peninsula, utilizing ground control established by the 30th Engineers under an arrangement made by the Geological Survey and the office of Chief of Engineers. I would like to emphasize the point that the extensive topographic mapping done by the Geological Survey in Alaska and the states serves both military and civilian uses. The same basic compilation is used in printing both a civilian series and a military series. These series differ only in marginal information and, in some instances, the type of lettering used on names.

We have made some progress in mapping southeastern Alaska. The Navy completed the vertical photography in 1948 and since then we have completed virtually all of the ground control necessary to start compilation of the maps. Five of the mile to the inch maps in the vicinity of Skagway and south along the Lynn Canal are completed through the drafting stage and may be printed by this time. Two mile to the inch maps covering Juneau are completed and published. We also have completed the compilation of some mile to the inch mapping on Prince of Wales, Baranof and Chicagof Islands.

These maps and, subject to security regulations, the basic control information and photography that is used in making them are available from the Geological Survey upon request. You can get information on the

availability of this data by writing the Map Information Office in Washington, D. C.; the Rocky Mountain Region Engineer at Denver, Colorado, or by contacting our office at Juneau, Anchorage, Palmer or Fairbanks. The maps are distributed from the Map Distribution Office, U. S. Geological Survey, Federal Center, Denver, Colorado, or Washington, D. C. They are also distributed from our offices in Juneau and Fairbanks, and in limited quantity by a sales agent, Irene Ryan, at Anchorage. Distribution is a major problem and we are giving particular attention to setting up a better system.

APPENDIX "C"

THE AVAILABILITY OF STATISTICS ON ALASKA'S COMMERCIAL FISHERIES

By C. Howard Baltzo
Assistant Regional Director, Fish and Wildlife Service, Alaska

Statistics lie at the very core of research. New investigations usually begin with a study of all pertinent facts susceptible to numerical interpretation or else immediately initiate methods for acquiring them. The fisheries constitute Alaska's foremost industry and, thereby, the principal support of her economy and government. Worth a round hundred million dollars annually, salmon, halibut, herring and shellfish must keep this Territory ticking until some other major industry such as aluminum or wood pulp can develop sufficiently to help shoulder the burden.

The reduced abundance of our salmon resources during the past several years is causing unrest and distress throughout the industry, from coastal communities of fishermen to stateside salmon packers and brokers. This agitation raises the question of what causes the depletion so that steps can be taken to correct it. Biological research alone can positively establish the reasons for curtailed supply. Considering the immense stakes involved, it is both perplexing and disheartening to contemplate the relative lack of knowledge available on the life histories of our principle species of fish and the present inadequacy of efforts to obtain it. Those of us in the field of fishery conservation sometimes give way to the cynical feeling that people are more interested in learning what destroyed a resource after it is gone than in trying to preserve and rebuild what they already have. Certainly, tax dollars for fishery investigation seem not obtainable in sufficient amount until resources are in grave peril.

But to get back to statistics, an important step forward has just been completed which will henceforth provide current and accurate data for those who study the commercial fisheries of Alaska. I refer to the establishment of the fish ticket system by the Fish and Wildlife Service for the itemized collection, tabulation and analysis of catch data. This has been adopted by most of the maritime states during the past decade and is now accepted as the best device for acquiring and recording fishery statistics. Briefly described, the method rests simply upon the governmental agency securing a copy of every original fish receipt or record which a dealer makes out when he buys the catch of a fisherman. In order to get a few additional facts which the dealer himself does not need, the government has the tickets printed and supplies them free to the industry. Diligent observation and even enforcement is necessary on the part of the agency's field personnel in order to insure complete and accurate reporting. The rest becomes a matter of mechanical manipulation, simple in principle but complex in operation.

A Statistical Unit consisting of two statisticians and three coding clerks and machine operators has been established at the Fish and Wildlife Service Montlake Laboratory in Seattle working under the Division

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of Fishery Management. Tickets are routinely processed according to standard IBM techniques and the end product for 1951 (the first year under the system) is the total seasonal catch of each species by each form of gear in each of a considerable number of districts delineated by geographic characteristics of the runs. This information for 1952 is already available. It is now evident that the addition of but one more employee will make possible a further breakdown to provide the above information on a daily basis and by much finer localities, eventually achieving pinpointing where research needs warrant. Such daily catches by each segment of the Alaskan fishery will be available for 1952 by the following spring.

A simultaneous product of the Service's Statistical Unit is an accounting and description of all gear employed in each of the various regulatory Areas each year. Fishing boats are registered in advance of the season and essential information processed through the IBM machines, which provides an annual measure of the shifting intensity of exploitation. Cooperation with registration requirements on the part of fishermen has been good, especially gratifying in view of reports that some states have had unsatisfactory results.

Prior to inauguration of the fish ticket system in 1951, what statistics on Alaska's fisheries were collected? For the first half-century of its existence, the chief problems of the industry have been economic. The supply was usually ample but the market was often unable to absorb what was produced. The logical result was a concentration on industrial and production data.

The Fish and Wildlife Service and its predecessor, Bureau of Fisheries, has published an annual series of Statistical Digests dating back to the turn of the century which quite accurately record each season's total pack, processors, equipment and employment, and somewhat less precisely the fishing gear and its catch. Totals are for full seasons only and the Territory is divided into but three major districts. Although current achievement of the fish tickets seems equivalent under terms of gross description, their accuracy and adaptation to detail is much greater and their potentialities are beyond comparison.

The Annual Digests were assembled manually from comprehensive but lengthy and resented reports which the operators submitted at the close of each year. Of prime importance is the rapidity with which analysis can be completed under the mechanics of IBM. Summaries are now possible a few months after conclusion of a season whereas the old Statistical Digests were always two to four years in arrears. Changes in the Alaskan fisheries, as with all other affairs in the Territory, are nowadays so rapid that a study of ancient history is of little use in understanding the problems of today.

The only catch figures now capable of yielding knowledge on past runs are those of fish traps. By virtue of their relative permanence and lesser numbers, this form of gear is most readily adaptable as a

yardstick of migration and abundance. Catch reports from all traps have been collected for many years and those of Southeastern are the subject of a continuing analytical project.

To clarify a few divergences, collection and analysis of halibut statistics is performed by the International Fisheries Commission which concerns itself almost solely with that species. Bristol Bay salmon are not under the fish ticket system because a much simpler reporting system by the canneries yields identical results. Troll-caught salmon in Southeast Alaska are also not reported by individual landings but an entire day's purchases are reported on a single ticket by each dealer. Besides the annual Statistical Digests of the Fish and Wildlife Service, which should be published much more promptly in the future, another source of production data is the trade journal, Pacific Fisherman. Its Annual is published in late winter and contains much preliminary material secured from the Fish and Wildlife Service and directly from operators. The Governor's Annual Report also publishes salient seasonal totals as developed by the Fish and Wildlife Service.

FOREST MANAGEMENT AND FIRE CONTROL PROBLEMS IN ALASKA

by R. R. Robinson, Regional Forester
Bureau of Land Management, Alaska

As managers and administrators of the Alaskan public domain and its forest and range resources, we of the Bureau of Land Management urgently need the help of research to do a better job. There is a complete lack of research data upon which we can develop our policies, programs, procedures, measures of achievements, budgetary needs and justifications. This does not mean management is prevented today, but rather, the most effective, efficient, and progressive management is probably not being achieved.

Our major goal of management is to obtain the most complete and best use of the land and resources - employing the precepts of multiple use, to the end that the maximum good is attained both today and in the future by Alaskans and the Nation.

This broad goal requires a knowledge of our domain lands and their resources, and a knowledge of the techniques needed to manage, develop, protect, and utilize these resources for the greatest good. Research of all types is needed in each of our management activities. While stateside experience and research may indicate general policies and procedures, our sub-Arctic environment creates ecological, social, and economic problems in management not found in the States,

There are about 265 million acres of public domain in Alaska. Within this area* unsupported estimates place 125 million acres of forested land and 100 million acres of rangeland (tundra, muskeg, brush, and grass). This vast acreage of natural resources is the backbone of Alaska's wealth today, and the base upon which its future development and economic well-being will be built. Upon these forest and range resources are dependent Alaska's mining, fishing, agriculture, trapping, and tourist industries as well as her wildlife, waterpower, stream control, water tables, and other related land uses. It is therefore evident that these resources should - in fact, must - be so managed and protected today as to prevent their depletion; indeed, they must be so improved and developed that future maximum utilization may be enjoyed by a more populous Alaska.

*More accurately, the 265 million acres represents the current estimate of the net acreage of unreserved, vacant public domain; whereas the forest and range acreage is based on the public domain existing in 1940 (323 million acres). The difference in domain acreages is due largely to withdrawals for military and other federal purposes but the resources are still handled by the Bureau of Land Management and are still considered as public resources.

The political and social development of the Territory, its potential statehood, and its economic future are not a part of this discussion, yet they should be recognized as having basic effects upon the problem of future resource management. We must plan on increased population, increased accessibility and use of the domain lands. We must reckon with the probable industrial growth which will result from, and be dependent upon, the economic and perpetual availability of her natural resources. We are pledged to help, within our power so to do, the building of a strong, healthy future for Alaska. A strong research program initiated now will assure this future.

Perhaps a little background data will help to portray the Bureau's present and future management problem. Although the Bureau has many problems in land disposal, surveying, and classification, I shall confine my comments to the activities of the Division of Forestry which I represent. The Division of Forestry is responsible for the management and protection of the public domain forest and rangelands, and for the development of recreational facilities on the domain lands.

Background to Fire Protection

Organized fire protection for the public domain has existed only since 1940. Prior years saw annual losses of 3 to 5 million acres, and it is believed that 80% of the lands have been burned one or more times in the past 50 to 70 years. The losses in timber, wildlife, and range cannot be guessed but must have approached \$100,000,000 annually. No land or political unit can afford such vast losses, no matter how great its original resource wealth.

The Alaskan Fire Control Service, predecessor to the Division of Forestry, was given an organizational budget of \$37,500 and the job of reducing these annual losses to an economic burn standard. Appropriations have gradually increased to the present \$210,000. The increase was not steady, in fact, it varied up and down as much as \$70,000 from year to year. Such variations made more difficult the job of fire control planning. Too, it was not until 1949 that emergency funds were made available for fire suppression purposes; prior to then we had to stand fire suppression costs within our annual budgets. Since fire occurrences are unpredictable and no respecters of Government fiscal years and fund controls it can be readily seen how it was impossible to plan efficient use of the allotted funds.

Annual losses from fire have been dropped from 4,500,000 acres in 1940 to as low as 18,147 acres in 1949. In 1950 the Fort Yukon fire destroyed the general downward trend and comprised a large share of the 2,063,983 acre loss that year. This year our loss is in the neighborhood of 60,000 acres. The monetary savings to Alaska and the United States by this sharply reduced burned acreage is substantial.

With some 225 million acres requiring some degree of fire protection, we are this year providing protection at the rate of 9/100 of one cent per

acre. This, I believe, may well be compared with the average cost in the States of 7 cent/acre and the west coast average of nearly 15 cents per acre. I do not wish to leave the impression that we are doing an adequate job now or that we are equipped to handle the increasing fire danger caused by Alaska's rapid development. We have had lucky breaks and a mild season this year. We estimate that a good degree of protection can be given during normal years at a per acre cost of 2½ to 3 mills. Even this price will be cheap insurance!

Effects of Fire

While speaking generally about fire it might be well to point out just a few of the major effects of fire on the public domain, on Alaskan industries, and on Alaskans themselves.

Wild fire destroys the habitat of fur-bearers, game animals, migratory fowl and other birdlife. Especially devastating to birds, fires destroy the nests, the young, and many of the older birds. The one million acre fire near Unalakleet burned throughout the summer of 1941 and must have destroyed thousands of birds. The two million acre fire at Fort Yukon in 1950 was damaging to wildlife. Fur-bearers lose their habitat and must move into new areas or else eke out an existence near the burned area. Good, prime pelts are obtained from unburned, rather than burned, areas. The lichen range destroyed by fire require from 40 to 300 years, with an average of 100 years, to regain its pre-fire forage capacity. Fur-bearers habitat takes an average of 10 years to provide cover for some kind of fur-bearer, not necessarily the same species nor in the same stocking as existed prior to the fire. Our wildlife, then, upon which many Alaskans depend for a livelihood and which are a lure to outside hunters, cannot thrive in a fire-ravaged country.

Our Alaskan watersheds, in this region of low rainfall, dry winds, and long daylight hours require a full vegetative cover if heavy, damaging run-offs, siltation of streams, fluctuating stream levels, and lowering water tables are to be avoided. Our placer mining industry and fishing industry is seriously affected when watersheds are destroyed. The watersheds of hydro-electric plants and city water systems may be made worthless through the effects of wild fire. The water tables of an area may be lowered thus causing residents to lose their shallow wells and go to the expense of deep well units.

Recreation will probably become the major industry, dollar-wise, in Alaska. Fire-blackened areas are not attractions to tourists or residents and may cause major losses in individual local investments when tourists avoid the areas.

Alaska has a great demand for air transportation and is dependent upon it for both civilian and military purposes. Smoke-filled skies can, and have, grounded aircraft for days at a time and made all flights hazardous - even up to altitudes of 30,000 feet.

Some 80% of our white spruce areas have been burned. The great future use of our interior forests is for pulp and paper or chemical pulp purposes. Such industries require large volumes of timber annually in perpetuity. Fires can destroy the timber resources and either prevent the establishment of these industries or ruin the investment of an established plant.

These few examples should emphasize the importance of fire control to the well-being of our resources and our Alaskan economy.

Background to Forest Management

There are an estimated 125 million acres of forests on the Alaskan public domain. Forty million acres are considered commercial forests and 85 million acres are of the sparse woodland type. There is believed to be as much as 350 billion board feet (700 million cords) of timber on the domain.

While many of these areas will have a major value for the local use of settlers, trappers, and miners, and for watershed and other purposes, there are large areas which can support pulp plants. While such plants cannot come in until there is plenty of cheap power and good water sources, their potential establishment merits our sincere present efforts to protect and build up the forest areas upon which they will be dependent.

Only since 1947, when the Division of Forestry was formed, has there been any real attempt made to manage our forest resources. Sales to date are not large; in fact, only 12 to 15 million board feet are cut under permit at present. Yet during the War when the Territory and military were nearly dependent upon our forests for their lumber requirements, as much as 125-150 million feet were cut. Income to the Government and the Territory from present sales is not great, because we are following the general policy that the timber is here to aid in the settlement and development of the Territory. Our typical settler is rather short of cash and he is able to obtain his timber requirements free of charge. When our spruce timber is sold for commercial purposes it has the modest stumpage price of \$1.50/Mbf.

While pulp plants may be the major potential forest industries of the future, our increasing population will require ever-increasing volumes of spruce. If these timber requirements are to be economically supplied, then the forests in the potential development areas must be protected from fire. The relative scarcity of timber along our present road systems and in the vicinities of Anchorage, Palmer and Fairbanks are good object lessons. Our birch and cottonwood areas are not to be overlooked in our survey of forest wealth. These species have an early potential use in a hardwood industry which we hope to establish in Alaska. Furniture, flooring, trim, and veneer are a few of the many products that these species will produce.

The Management Problems

So much for the present picture. I would now like to list a few of our management and protection problems and point out where research is needed if we, as managers, are to adopt and pursue policies and practices which will stand the test of time. I want to stress here that foresters do not enjoy the advantages of annual turnover of their resource. Most of us will never see the results of our plans, or mistakes, made today. We must through careful judgement and research apply the knowledge of the past history of our forests against our hopes for the future. The better our present knowledge, based on intensive research, the greater is our chance of success in developing a better, stronger forest economy for the future.

1. An inventory of our forest cover and range wealth is needed so that we may know where it is, how much we have, the quality, and the best potential use of each species and area. To obtain these data for such a vast area, at a reasonable cost, vertical aerial photos will be necessary. A technique of type sampling will have to be developed which will give reasonable accuracy both rapidly and cheaply.

2. We need much in the way of basic data - such as volume, yield, and increment tables, site and form class studies, etc. There are none in existence today. These data are needed to make our forest inventory as well as for tools in setting up sustained-yield management areas. It must be remembered that the ultimate good to be obtained from our forested areas is their contribution to the local economy through perpetual use and availability. The sustained-yield management principle assures this goal by avoiding over-cutting, improving utilization and otherwise avoiding the pitfalls of short-range, poorly-conceived planning. But basic data is needed before this sound management technique can be competently initiated.

3. Since forest and range fires are a major threat to our vegetative resources and to their dependent resource users, it is essential that these fires be extinguished promptly with a minimum of cost and burned acreage. Fire fighting technique in this land of the midnight sun is similar to that in the States but has definite, distinctive features. These coupled with problems of distance, modes of transportation, weight factors, availability of personnel, communication, and time make fire control in Alaska unique. Prompt suppression at reasonable cost is the goal; techniques perfected through research will attain it.

4. Just what are the ecological effects of fire on our domain lands? Professor H. J. Lutz of Yale University has this year written his final report on three year's field study of this problem. However, in this short time he has been able to just scratch the surface of this subject; I am sure that in his paper he will point out many facets of this problem which need more intensive study.

With such knowledge we can better judge the extent of damages caused by our fires, and the steps we may be able to take to overcome or modify them. We will also be better able to determine what burn standards can