

[EXTRACT FROM THE ANNUAL REPORT OF THE CHIEF OF ENGINEERS  
TO THE SECRETARY OF WAR]

WAR DEPARTMENT,  
OFFICE OF THE CHIEF OF ENGINEERS,  
*Washington, October 4, 1927.*

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1975

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BOARD OF ROAD COMMISSIONERS FOR ALASKA

OFFICERS OF THE BOARD

President: Maj. James G. Steese, Corps of Engineers, United States Army, retired.

Engineer officer: Maj. Lunsford E. Oliver, Corps of Engineers, United States Army, to June 19, 1927, and Maj. James G. Steese from June 20, 1927, to date.

Secretary and disbursing officer: Second Lieut. Frank A. Pettit, Corps of Engineers, United States Army, to December 31, 1927, and Second Lieut. Arleigh T. Bell, Corps of Engineers, United States Army, from January 1, 1927, to date.

Military assistants, under the immediate orders of the president of the board: First Lieut. Harry E. Fisher, Corps of Engineers, United States Army, to November 1, 1926; Second Lieut. Arleigh T. Bell, to December 31, 1926; Second Lieut. John R. Noyes, Corps of Engineers, United States Army, from November 9, 1926, to date; Second Lieut. Frank A. Pettit, from January 1, 1927, to date; and Maj. Lunsford E. Oliver, June 20 and June 21, 1927.

*Organization and duties.*—The act of Congress approved January 27, 1905, "To provide for the construction and maintenance of roads \* \* \* in the District of Alaska, and for other purposes," as amended and supplemented, prescribes in part as follows:

*Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,* That all moneys derived from and collected for liquor licenses, occupation, or trade licenses outside of the incorporated towns in the Territory of Alaska shall be deposited in the Treasury Department of the United States, there to remain as a separate and distinct fund, to be known as the Alaska fund, and to be wholly devoted to the purposes hereinafter stated in the Territory of Alaska \* \* \* and all the residue (65 per cent of total fund) of said fund shall be devoted to the construction and maintenance of wagon roads, bridges, and trails in said Territory \* \* \*.

SEC. 2. That there shall be a board of road commissioners in said district, to be composed of an Engineer officer of the United States Army to be detailed and appointed by the Secretary of War, and two other officers of that part of the Army stationed in said district and to be designated by the Secretary of War. The said Engineer officer shall during the term of his said detail and appointment abide in said district. The said board shall have the power, and it shall be their duty, upon their own motion or upon petition, to locate, lay out, construct, and maintain wagon roads and pack trails from any point on the navigable waters of said district to any town, mining or other industrial camp or settlement, or between any such towns, camps, or settlements therein, if in their judgment such roads or trails are needed and will be of permanent value for the development of the district; but no such road or trail shall be constructed to any town, camp, or settlement which is wholly transitory or of no substantial value or importance for mining, trade, agricultural, or manufacturing purposes. \* \* \* In case no responsible and reasonable bid can be secured, then the work may be carried on with material and men procured and hired by the board. The Engineer officer of the board shall in all cases supervise the work of construction and see that the same is properly performed. \* \* \* It shall be the duty of said board, as far as practicable, to keep in proper repair all roads and trails constructed under their supervision, and the same rules as to the manner in which the work of repair shall be done, whether by contract or otherwise, shall govern as in the case of the original construction of the road or trail. The cost and expense of laying out, constructing, and repairing such roads and trails shall be paid by the Secretary of the Treasury, through the authorized disbursing officer of the board, designated by the Secretary of War, out of the road and trail portion of said "Alaska fund" upon vouchers approved and certified by said board \* \* \* (Act of January 27, 1905, 33 Stat. 616, as amended by acts of May 14, 1906, 34 Stat. 192, and March 3, 1913, 37 Stat. 728.)

*Provided*, That hereafter the Secretary of War may, in his discretion assign suitable retired officers of the Army to active duty as members of the board of road commissioners for Alaska. (Act of March 3, 1911, 36 Stat. 1052.)

*Provided*, That hereafter, so long as the construction and maintenance of "military and post" roads in Alaska, and of other roads, bridges, and trails in that Territory shall remain under the direction of the Secretary of War, he be authorized to submit such estimates for the consideration of Congress as are in his judgment necessary for a proper prosecution of the work. (Act of July 9, 1918, 40 Stat. 843.) Hereafter when an appropriation for this purpose for any fiscal year shall not have been made prior to the 1st day of March preceding the beginning of such fiscal year, the Secretary of War may authorize the board of road commissioners to incur obligations for this purpose of not to exceed 75 per centum of the appropriation for this purpose for the fiscal year then current, payment of these obligations to be made from the appropriation for the new fiscal year when it becomes available. (Act of February 12, 1925, 43 Stat. 986.)

*Provided*, That the Secretary of War is hereby authorized to receive from the Territory of Alaska, or other source, such funds as may be contributed by them to be expended in connection with funds appropriated by the United States for any authorized work of construction, repair, and maintenance of roads, bridges, ferries, trails, and related works in the Territory of Alaska, and to cause such funds to be deposited to the credit of the Treasurer of the United States, and to expend the same in accordance with the purpose for which they were contributed. (Act of June 30, 1921, 42 Stat. 90.)

*Construction and maintenance of roads, bridges, and trails, Alaska.*—For the construction, repair, and maintenance of roads, tramways, ferries, bridges, and trails, Territory of Alaska, to be expended under the direction of the board of road commissioners described in section 2 of an act entitled "An act to provide for the construction and maintenance of roads, the establishment and maintenance of schools, and the care and support of insane persons in the District of Alaska, and for other purposes," approved January 27, 1905, as amended by the act approved May 14, 1906, and to be expended conformably to the provisions of said act as amended, \$1,000,000, to be immediately available. (Act of February 23, 1927.)

The board was organized May 15, 1905. War Department orders of February 15, 1913, relative to the work of the board, prescribe that the senior officer on duty, designated as president, shall have general charge of the operation, that the Engineer officer shall supervise the work of construction in the field as provided by law, and that the third officer shall act as disbursing officer of the board.

From its organization until December 29, 1917, the board reported direct to the War Department through The Adjutant General. On that date orders were issued by the Secretary of War placing the work under the general supervision of the Chief of Engineers.

*Offices of the board.*—The principal office of the board is at Juneau, Alaska. Suboffices are maintained, when required by active operations, at Valdez, Chitina, Fairbanks, Eagle, Anchorage, Seward, Takotna, and Nome, Alaska; Seattle, Wash.; and Washington, D. C.

*Location and description.*—The work thus far accomplished includes the construction of 1,487½ miles of wagon road, 100 miles of tramroad, 1,221½ miles of sled road, 6,925½ miles of permanent trail, and 712 miles of temporary flagged trail, a total of 10,446½ miles.

The Territory has an area of 590,880 square miles, which is more than twelve times the size of the State of New York, or practically one-fifth the size of the United States proper. At its southern point it is 700 miles from the northwest point of the State of Washington by the usually traveled route. Thence the southeastern Alaska Archipelago and a strip of mainland lying west of the Canadian boundary extend northwesterly for about 520 miles to the major portion of the Territory, which lies west of the one hundred and

forty-first meridian and has a dimension of approximately 900 miles north and south and 700 miles east and west, with the Alaska Peninsula and Aleutian Islands reaching out from the southwestern portion nearly 2,500 miles toward Siberia.

The topography of Alaska varies from rolling to extremely rugged, with little level area. The seaward slope, as far west as Cook Inlet, is especially rugged and subject to a heavy rain and snow fall.

The timber along the coast attains a dense growth, but in the interior is only found along the stream valleys. Spruce and hemlock form the greatest part of the timber on the coast. Hemlock is not found in the interior.

On the north slope of the Alaska range and on interior river valleys considerable areas are found frozen permanently to bedrock. The climate and topography throughout are such that in the summer time passage overland is difficult. On the seaward slope the heavy rainfall upon the blanket of decayed vegetation creates a footing almost impassable. In the interior the surface thawing of the bed of frozen gravel makes a widespread and difficult morass.

*Original condition.*—Prior to the organization of the Board of Road Commissioners for Alaska there were in the whole of the Territory less than a dozen miles of what might be called wagon road, with a few hundred miles of pioneer trail, mostly constructed by expeditions under the War Department. Travel was largely confined to the open waterways in summer and to their frozen courses overland in winter. When mining machinery and other supplies were to be transported from the coast or river landing they were in most cases hauled over the snow during the winter, with some preliminary clearing of the route when necessary. Travel across country in summer, generally speaking, was possible only on foot or with pack horses. It was difficult always, and frequently dangerous, on account of the numerous swift and deep streams, fed by the ice-cold and silt-laden waters of mountain glaciers.

*Previous projects.*—See description in Annual Report of the Chief of Engineers for 1923, beginning on page 2086. A new program of operations was recommended in the Annual Report of the Chief of Engineers, 1920, pages 61 to 65. The amounts expended on previous projects prior to June 30, 1921, were \$3,727,249.69 for new work and \$2,276,812.27 for maintenance, a total of \$6,004,061.96.

*Existing project.*—For description of development of existing project, see Annual Report of the Chief of Engineers for 1924, page 2069.

The proposed annual appropriations and the amounts actually appropriated under the 1920 program described in the Annual Report for 1924, are as stated in the table below:

Fiscal year	Working season	Amount estimated	Amount actually appropriated
First (1922).....	1921	\$955,000	\$425,000
Second (1923).....	1922	1,200,000	465,000
Third (1924).....	1923	1,500,000	650,000
Fourth (1925).....	1924	1,600,000	780,000
Fifth (1926).....	1925	1,400,000	900,000
Total for first 5 years.....		6,655,000	3,220,000

The total appropriations for the first five years were less than half the estimates, and about three-fourths of the available funds were required for maintenance and repair. Construction should be speeded up so as to get the maximum benefit from the work already accomplished, and the 1920 program was, therefore, revised in 1924. The appropriations recommended for the second five years of the 10-year period are as follows:

(a) For maintenance and improvement of existing routes to the same standard throughout, 9,736 miles, at \$870,000 per year--	\$4,350,000
(b) For completion of projects already undertaken-----	1,735,000
(c) For completion of projects already approved but not yet undertaken-----	1,780,000
(d) For completion of projects likely to arise with development during the five years-----	1,135,000
Total for five years-----	9,000,000

*Federal appropriations required each year of five-year period of road and trail development*

## 1924 PROGRAM

Fiscal year	Work- ing season	(a) Mainte- nance, existing routes	(b) Comple- tion, approved projects already under way	(c) Construc- tion, approved projects not yet under way	(d) Construc- tion, new projects likely to develop	Total estimated	Amount actually appropri- ated
1927-----	1926	\$860,000	\$510,000	\$290,000		\$1,750,000	\$900,000
1928-----	1927	860,000	475,000	575,000	\$100,000	2,000,000	1,000,000
1929-----	1928	860,000	400,000	550,000	200,000	2,000,000	
1930-----	1929	860,000	250,000	300,000	350,000	1,750,000	
1931-----	1930	860,000	100,000	65,000	485,000	1,500,000	
Total-----		4,360,000	1,735,000	1,780,000	1,135,000	9,000,000	1,900,000

For latest published maps see map following page 54, Part II, of the annual report of the Alaska Road Commission fiscal year 1921, and also a wall map of Alaska published by the board of road commissioners, 1923.

*Recommended modifications of project.*—None.

*References to published articles not previously reported.*—"The Building of Roads in Alaska," the Military Engineer, January-February, 1927, pages 42-47, illustrated, by Maj. Lunsford E. Oliver, Corps of Engineers, United States Army.

*Local cooperation.*—For description of development of local cooperation, authorized by the act of June 30, 1921, previously quoted see Annual Report of the Chief of Engineers for 1924, beginning on page 2071.

Under the provisions of section 17 of the Territorial road law of April 21, 1919, Mr. Anton Eide, assistant superintendent of the board for southwestern Alaska, acted as chairman and secretary of the Territorial divisional road commission for the third division. Similarly, Mr. Hawley W. Sterling, superintendent of the board for the Fairbanks district, acted as chairman and secretary of the fourth divisional road commission. No Territorial road organization has been maintained since March 31, 1921.

During the fiscal year the board supervised the expenditure of \$13,052.15 by the chairman of the Territorial road commission for

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the third division and \$13,844.42 by the chairman of the Territorial road commission for the fourth division.

During the fiscal year it has expended directly \$8,624.34 for shelter cabins, \$73,714.06 for roads, \$10,366.74 for aviation fields, and \$1,382.50 for telephone lines, from funds contributed by the Territory, and \$6,289.98 contributed by others.

For the working season of 1927 the Territorial board has allotted to the Department of Agriculture \$35,750 and to the Federal board the following amounts:

Cooperative projects.....	\$127,550.00
Shelter cabins.....	25,000.00
Aviation fields.....	23,926.38
Telephone lines.....	7,468.40
Nome Harbor.....	2,500.00
Valdez Dike.....	10,000.00
<b>Total.....</b>	<b>196,444.78</b>
Chairman third division.....	14,100.00
Chairman fourth division.....	22,100.00
<b>Grand total.....</b>	<b>232,644.78</b>

These funds are held subject to the call of the Federal board. The divisional funds are disbursed through local banks, but all vouchers are audited by the Federal board under the same restrictions that apply to Federal vouchers before being certified to the Territorial treasurer for payment.

Cooperation with the Territory has been continued in connection with the purchase, rehabilitation, and operation of two tramroads, one extending from Nome to Shelton on the Seward Peninsula, a distance of about 87 miles, and the other situated in the Tolovana district about 50 miles northwesterly from Fairbanks and extending from the town of Brooks about 13 miles southerly to the head of navigation on the Tolovana River.

The Nome-Shelton tramroad was purchased on October 3, 1922, for \$24,014. During the fiscal year \$22,073.16 was spent on its rehabilitation.

The Tolovana tramroad was purchased on June 11, 1924, for \$6,425. During the fiscal year \$6,932.08 was spent on its rehabilitation.

During the year the board assumed responsibility for the construction and maintenance of 24 aviation fields and the repair and maintenance of 400 miles of telephone lines for the Territory.

The 1919 Territorial road act released cooperative national forest funds of the Department of Agriculture which had been accumulating for several years. Until July 1, 1920, Maj. William H. Waugh, engineer, United States Army, a former engineer of the Bureau of Public Roads and up to that date a member of the Board of Road Commissioners for Alaska, served also as the representative of the Department of Agriculture in charge of national-forest road construction.

On July 1, 1920, the Department of Agriculture created a separate organization to handle its work and took over a few of the board's projects. The department funds were inadequate to handle all of the projects in the national forests that were under construction under the board.

When greatly increased funds for the national forests became available in 1922 the board offered its services to handle all forest-road construction in accordance with the requirements of the Forest Service, but the Department of Agriculture decided to increase its own organization. Since May 1, 1922, it has assumed responsibility for all former projects of the board within or partly within the national forests. The funds of this board formerly absorbed in these projects are thereby available for use in other parts of the Territory.

The general road and trail system of the board ties into the Alaska Railroad, operated by the Secretary of the Interior, at 27 different stations. These highway and trail feeders to the Government railroad are an important factor in increasing business for the railroad, and thereby reducing its present operating deficit.

Since April 1, 1922, the board, under an agreement with the Secretary of the Interior, has handled road and trail work in the Territory for the National Park Service, including the construction and maintenance of the Mount McKinley National Park Highway, authorized by the act of Congress approved April 9, 1924.

*Consolidation of road work under the board.*—From the foregoing it will be noted that all road and trail work in the Territory of Alaska, including work supported by appropriations of the Territory, of the War Department, and of the Department of the Interior, but excluding the former projects of the board in the National Forests now supported by appropriations of the Department of Agriculture, is consolidated under the direction of the board.

The act of Congress approved February 10, 1927, contains the following proviso:

*Provided,* That the charge and control of all matters relating to the construction and maintenance of roads in Alaska which may now be under the jurisdiction of any other department, bureau, or agency of the Government, together with the records or transcripts thereof, the property, including field and office equipment and the unexpended balances of appropriations pertaining thereto, may, with the concurrence of the Secretaries of the respective departments involved, be assigned to the Board of Road Commissioners for Alaska, created by and in pursuance of the provisions of section 2 of the act of Congress entitled "An act to provide for the construction and maintenance of roads, the establishment and maintenance of schools, and the care and support of insane persons in the District of Alaska, and for other purposes," approved January 27, 1905, as amended by the act approved May 14, 1906.

Action under this act awaits the concurrence of the Secretary of Agriculture. When it is put into effect, great economies will immediately result from the elimination of duplicate headquarters personnel, rent, heat, light, etc., in Juneau, and duplicate supervisory field organizations in the first and third divisions of the Territory. Subsequently additional economies and a more efficient and effective management will result from the coordination and consolidation of personnel, methods, equipment, etc.

*Effect of improvement.*—The roads and trails constructed by the board have not only opened up to development nearly all sections of the Territory but have effected large savings in freight charges. The major portion of this freight would not have been transported without the roads, and the indirect loss that would have been occasioned by the restriction on output and development if the roads did not exist can not be estimated.

The use of automobiles is increasing rapidly. Approximately 90 per cent of the traffic on the main wagon roads is handled by motor, which has greatly increased the cost of road maintenance. The use of tractors for drawing freight, particularly on the sled roads of the interior, is a valuable new development.

*Operations and results during fiscal year.*—The work in the last fiscal year was largely directed to extending the general rehabilitation begun in 1920 to trails and roads in remote portions of the Territory. This gradual rehabilitation started on the more important projects and has now reached trails extending to all inhabited parts of the Territory.

The work accomplished during the fiscal year may be summarized as follows:

New construction: 76 miles wagon road, 135 miles sled road, 387½ miles trail, 740 linear feet of bridges of 60-foot span and over, 16 airplane landing fields, and 19 shelter cabins.

Improvement: 96 miles wagon road reconstructed, 100 miles wagon road graveled, 15 miles Nome-Shelton tramway raised to standard of 8-ton loads, and innumerable small bridges and culverts rebuilt.

Maintenance: 1,067 miles wagon road, 85 miles tramway, 758½ miles sled road, 4,692¼ miles permanent trail, 313 miles temporary flagged trail, 400 miles telephone lines, 4 airplane landing fields and 25 shelter cabins. Total for all classes of work, 7,725¼ miles, consisting of 1,339½ miles of wagon road, 100 miles of tramway, 893½ miles of sled road, 5,079¾ miles of permanent trail, and 313 miles of temporary flagged trail.

The more important roads upon which new construction was performed were the Haines-Pleasant Camp, McCarthy-Nizina, Chatanika-Circle, Mount McKinley National Park, Gulkana-Chistochina, Long-Poorman, Ophir-Takotna, Wiseman-Nolan, Wiseman-Hammond, Kodiak-Abberts, Homer Spit, and Talkeetna-Cache Creek. The extensive bridge program inaugurated the previous year was continued. The more important structures upon which new construction or extensive repairs were performed included bridges across Valdez Glacier Stream, Stewart Creek, Tonsina, Tazlina, Glacier Streams at mile 222 and 223 on Richardson Highway, West Fork Tolovana River, Little Susitna, and two crossings of Kotsina River.

The important Richardson Highway, which was reopened in 1921, was maintained open during the entire season. Improvement to new standard was placed on a three-year program for completion and at least one-third of this program was accomplished during the year. As a result of the rapid improvement, both local and tourist travel has continued to increase over this route. During the 1927 season tourist travel began in June.

The extension of the Richardson Highway from Chatanika to Circle was also put on a three-year program to open for through traffic. Well over one-third of this program was accomplished during the year.

Excellent progress was made on all this work during the past season, due partly to an early spring and favorable weather conditions generally. A late spring in 1927 has somewhat retarded opening up work.

The total expenditures during the fiscal year amounted to \$1,217,166.89, of which \$706,792.46 was for construction and \$510,374.43 was for maintenance.



*Condition at end of fiscal year.*—The work of maintenance and rehabilitation has been pushed, and the roads and trails under the jurisdiction of the board are in better shape than ever before. Work was performed upon 7,725¾ miles of the system during the fiscal year.

The 410-mile Valdez-Chitina-Fairbanks road received special attention. One more season should see this important overland route completed to a uniform standard and given a gravel surface throughout. Over 140 miles of the 165-mile extension from Fairbanks to Circle, on the upper Yukon, are now passable for wagons, and the entire route is utilized for winter travel by double bobsled.

The total expenditures to the end of the fiscal year, June 30, 1927, amounted to \$11,202,790.99, not including outstanding liabilities or contributed funds, of which \$6,585,880.40 was expended for new construction and \$4,616,910.59 for maintenance.

*Proposed operations.*—The 10-year program described under "Existing project" proposed the appropriation of \$2,000,000 for the prosecution of the work for the fiscal year ending June 30, 1928. Only \$1,000,000 was provided by the act of February 23, 1927. These funds will be expended on rehabilitation and some improvement of the existing system. Unless much greater annual appropriations are made, little can be done to meet the pressing need for improvements and extensions of the system, especially in providing urgently needed highway and trail feeders to the Government railroad (the Alaska Railroad) now completed. For the fiscal year 1927 Congress provided for a maintenance and operations deficit on the Alaska Railroad of \$1,200,000.

The annual maintenance of the road and trail system after completion, as nearly as can be estimated at this time, will cost about \$550,000.

*Amount which can be profitably expended during the fiscal year ending June 30, 1929.*—An appropriation, in accordance with the 1924 program, of \$2,000,000, to be distributed approximately as follows, can be profitably expended on the work during the fiscal year ending June 30, 1929:

District	Maintenance of existing projects						
	Mileage, existing system			(a) Repair and improvement	Average per mile		
	Roads	Sled roads	Trails		Roads	Sled roads	Trails
Southeastern.....	81¾		5	36,025	440		5
Bethel.....			988	7,750			8
Eagle.....	29	174¾	388	22,500	500	30	7
Valdez.....	105¾			162,000	1,540		
Chitina.....	220¾		401½	104,000	830		5
Fairbanks.....	575	783¾	1,071	244,030	330	20	10
Southwestern.....	202¾	183	418½	55,280	240	20	6
Kuskokwim.....	82¾	53½	1,150½	47,700	490	20	5
Nome.....	280¾	27	1,154	80,705	230	80	5
Total.....	1,587½	1,221½	7,637½	850,000	490	22	6

1 Includes 712 miles temporary flagged trails.

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District	New construction			Total (b), (c), and (d)	Grand total of estimates (a), (b), (c), and (d)
	(b) Approved projects already under way	(c) Approved projects not yet started	(d) New projects likely to develop		
Southeastern.....			20,000	20,000	58,025
Bethel.....			20,000	20,000	27,750
Eagle.....					22,500
Valdez.....			25,000	25,000	187,000
Chitina.....	50,000		110,000	160,000	354,000
Fairbanks.....	275,000	305,000		580,000	824,030
Southwestern.....	60,000	125,000		185,000	240,290
Kuskokwim.....	15,000		25,000	40,000	87,700
Nome.....		120,600		120,600	200,705
Total.....	400,000	550,000	200,000	1,150,000	2,000,000

COMMERCIAL STATISTICS

Total commerce of Alaska for the calendar year 1926:

IMPORTS

Merchandise from the United States.....	\$31,587,337
Merchandise from foreign ports.....	543,683
Silver and gold from foreign ports.....	30,014
<b>Total imports.....</b>	<b>32,161,034</b>

EXPORTS

Merchandise to the United States.....	74,720,587
Merchandise, gold, and silver to foreign ports.....	522,592
Domestic gold and silver to the United States.....	6,160,942
Foreign gold and silver to the United States.....	30,530
<b>Total exports.....</b>	<b>81,434,651</b>

Grand total, exports and imports..... 113,595,685

This is an increase of \$18,172,439, or over 19 per cent over the corresponding figure for 1925. The increase in exports alone was 31 per cent.

The value of Alaska's mineral output in 1926 was \$17,941,469 as compared with \$17,850,000 in 1925.

Minerals are being produced in the following order of value: Copper, gold, silver, coal, palladium, lead, petroleum, tin, and platinum.

Due to a general decline in price the slight increase in the value of mineral products does not indicate the full increase in mining activities.

There are still large areas in Alaska that have not been adequately prospected, and many promising properties are now lying idle because of lack of capital for the necessary equipment. The shortage of enterprising prospectors is a serious drawback that has resulted because wages for comparable work are actually lower in Alaska than in the States though expenses are higher. As a consequence Alaska does not attract or hold the class of prospectors it formerly did.

Quoting from Dr. A. H. Brooks, late chief Alaskan geologist of the United States Geological Survey:

The Alaska gold miner shares with his colleagues in the rest of the world the disability produced by the disrupted economic conditions, which cause very high operation costs, while the value of his produce remains fixed. Were it not for the improvement in transportation furnished by the railroads and wagon roads, that in certain districts have reduced costs, Alaska gold output would have been far less than it has been.

The production of coal was maintained in 1926 at approximately the same rate as heretofore and was furnished mainly by the Evan-Jones, Alaska-Matanuska, and Premier mines in the Matanuska region and the Suntrana mines in the Healy River region. Some development work under lease or permit was also done at the Rawson mine on Moose Creek and on Coal Creek opposite Chickaloon. Several of the producing mines carried out considerable construction work during the year.

In 1926 as in the past, all the petroleum produced in Alaska was obtained from about a dozen small wells in the Katalla field, on the only patented tract of oil land in the Territory. These wells and a small refinery are operated by the Chilkat Oil Co., which sells its gasoline and distillate in the local market. Interest in the exploration of promising oil field in Alaska continues. Drilling to test for oil in the vicinity of Johnson Creek in the Yakataga region was carried on by the General Petroleum Co. with quite encouraging results. Examination of the naval petroleum reserve No. 4 in northern Alaska and adjacent regions was continued by a party from the Geological Survey, which went over land during the winter and spent all the summer in field work in this area. No new seepages or other definite indications of petroleum were found, but the party reports that at many places excellent structural features were recognized which afford good collecting places for any oil that might have originated in the near-by rocks.

During 1926 the production of canned salmon reached the highest peak in the history of the fisheries of Alaska with a total of 323,396,942 pounds, valued at \$48,405,279. This is an increase of more than 102,000,000 pounds over the 1925 production and a value of more than \$19,559,000. This production exceeds the war-time peak of 1918 by 15,137,676 pounds and \$3,485,513 in value. The product of this industry is of greater value than all other products of Alaska put together, including gold and silver. The value of fish and fish products for 1926 was \$56,744,490, which is almost 70 per cent of the value of shipments from the Territory.

The relative value of the chief fish products exported in 1926 is as follows: Canned salmon, cured or preserved herring, fresh and frozen halibut; clams and shrimp, etc.; cured or frozen salmon, fish oil, fresh or frozen salmon, cured or preserved cod, and fish meal.

*Additional duties of the board.*—The president of the board is also district engineer for the Juneau, Alaska, river and harbor district. The other two members of the board are placed under the immediate orders of the district engineer and the secretary and disbursing officer of the board is disbursing officer for the district. Expenditures, \$129,169.18.

The president of the board, in addition to his other duties, has under the provisions of acts of Congress approved June 17, 1910, and June 15, 1917, been detailed for consultation or to superintend the construction or repair of any aid to navigation authorized by Congress in the sixteenth (includes Territory of Alaska) lighthouse district and reported by letter to the Secretary of Commerce.

By informal agreement with the Territorial board of road commissioners this board has agreed, under the terms of the Territorial act of April 21, 1919, to permit its assistant superintendent for the southwestern district and its superintendent for the Fairbanks district to be appointed chairmen and secretaries of the third and fourth Territorial road districts, respectively, to supervise their operations and to certify vouchers to the Territorial treasurer for payment, following the same general procedure as for Federal vouchers. Expenditures, \$26,896.57.

Effective November 14, 1921, the president of the board was appointed consulting engineer for the Territory and assumed direct charge of all Territorial public works. In May, 1923, he was appointed director of public works for the Territory. Expenditures, \$103,001.10.

By informal arrangement, effective April 1, 1922, the president of the board has agreed to act for the National Park Service, Department of the Interior, on certain matters relating to the improvement of the Sitka National Monument and the development of Mount McKinley National Park. Expenditures, \$16,549.62.

At the request of the Quartermaster General of the Army, the board has agreed to assume charge of the administration of the Sitka National Cemetery, created by Executive order of June 12, 1924. Expenditures, \$812.

At the request of the Quartermaster General of the Army, the board submitted a special report upon the water-supply system of Chilkoot Barracks, Alaska, and has assumed charge of the construction of a 1,500,000-gallon concrete reservoir and repairs to the pipe line crossing Chilkat Inlet. This work was completed during the fiscal year. Expenditures, \$8,578.89.

*Financial summary*

Amount expended on all projects to June 30, 1927, including receipts from sales, etc.:		
During fiscal years 1905-1920.....	\$5,234,085.63	
During fiscal years 1921-1926.....	4,854,539.57	
Fiscal year 1927.....	1,114,165.79	
		\$11,202,790.99
Alaska special fund, 1920.....	101,184.56	
Alaska special fund, 1921-1926.....	621,362.77	
Alaska special fund, 1927.....	103,001.10	
		825,548.43
		<u>12,028,339.42</u>
Total for new work.....	7,028,942.82	
Total for maintenance.....	4,999,396.60	
		12,028,339.42
Balance unexpended.....		888,399.68
Grand total to be accounted for.....		<u>12,916,739.10</u>

Appropriations to June 30, 1927:

Construction and maintenance of military and post roads, bridges, and trails, Alaska.....	\$8,548,100.00
Wagon roads, bridges, and trails, Alaska fund.....	3,156,026.52
Increase of compensation, War Department.....	95,059.50
National cemeteries.....	1,402.17
Roads and trails, national parks.....	146,000.00
Funds contributed by Territory of Alaska and others for public roads, bridges, trails, and ferries, Alaska special fund.....	819,895.44
Refunds to War Department appropriations.....	19,203.60
Sales, refunds, etc., Alaska fund to June 30, 1920.....	50,910.77
Sales, refunds, etc., Alaska fund since June 30, 1920.....	64,955.61
Sales, refunds, etc., to accrue to Alaska fund, June 30, 1927.....	692.04
Refunds to increase of compensation.....	16.95
Refunds to roads and trails, national parks.....	20.94
Refunds to contributed funds.....	10,479.37
Reimbursement from Navy Department.....	3,976.19
<b>Total.....</b>	<b>12,916,739.10</b>

Fiscal year ending June 30	1923	1924	1925	1926	1927
Expended for improvement and new work.....	\$314,195.89	\$490,360.53	\$728,040.04	\$828,045.88	\$706,792.46
Expended for maintenance.....	426,887.10	445,747.12	410,307.60	483,272.81	510,374.43
<b>Total expended (net).....</b>	<b>740,082.49</b>	<b>936,107.65</b>	<b>1,138,347.64</b>	<b>1,311,317.69</b>	<b>1,217,166.89</b>
Appropriated by War Department acts.....	1,115,000.00	725,600.00	955,000.00	900,000.00	1,022,500.20
Allotted from Alaska fund.....	119,227.10	115,803.20	123,871.83	137,431.66	142,905.08
National cemeteries.....			300.00	302.17	800.00
Contributed by Territory of Alaska and others.....	118,392.42	110,865.85	79,861.57	136,318.11	93,772.39
Roads and trails, national parks.....			80,000.00	50,000.00	16,000.00
Increase of compensation, War Department.....	28,857.72	58,968.95	1,835.54		
<b>Total.....</b>	<b>1,376,477.24</b>	<b>1,011,227.50</b>	<b>1,240,868.44</b>	<b>1,224,051.94</b>	<b>1,275,977.67</b>

July 1, 1926, available balance.....	\$812,070.22
Amount appropriated by War Department, act approved Feb. 23, 1927.....	1,000,000.00
Amount appropriated by War Department, act approved Feb. 23, 1927, for Juneau Wharf.....	22,500.00
Amount accrued to Alaska fund during fiscal year 1927.....	142,905.28
Amount contributed by Territory of Alaska and others.....	93,772.39
Refunds, all appropriations.....	4,812.03
Receipts from sales, etc., during fiscal year 1927.....	12,706.65
National cemeteries, 1927.....	800.00
Roads and trails, national parks, 1927-28.....	16,000.00
<b>Total resources.....</b>	<b>2,105,566.57</b>
June 30, 1927, amount expended during fiscal year, including receipts from sales, etc.:	
New work.....	\$706,792.46
Maintenance.....	510,374.43
<b>Total.....</b>	<b>1,217,166.89</b>
July 1, 1927, balance unexpended.....	888,399.68
July 1, 1927, outstanding liabilities.....	302,769.29
July 1, 1927, balance unobligated.....	585,630.39
Amount available from War Department, act approved Feb. 23, 1927.....	747,852.40

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Amount available from War Department, act approved Feb. 23, 1927, for Juneau Wharf.....	\$22,500.00
Amount available from Alaska fund on June 30, 1927.....	112,528.86
Sales to accrue to Alaska fund on June 30, 1927.....	692.04
Amount available from funds contributed on June 30, 1927.....	4,826.38
<b>Amount available for fiscal year ending June 30, 1928.....</b>	<b>888,399.68</b>
<b>Amount (estimated) required to be appropriated for completion of existing projects.....</b>	<b>7,100,000.00</b>
<b>Amount that can be profitably expended in fiscal year ending June 30, 1929:</b>	
New work.....	1,150,000.00
Maintenance.....	850,000.00
<b>Total.....</b>	<b>2,000,000.00</b>

APPROPRIATIONS

1. Construction and maintenance of military and post roads, bridges, and trails, Alaska:	
Total amount appropriated to June 30, 1920 (see detailed statement on p. 2105, Annual Report of the Chief of Engineers, 1920).....	
	\$3,370,000.00
Act of—	
June 20, 1906.....	*35,000.00
June 30, 1921.....	425,000.00
June 30, 1922.....	485,000.00
Mar. 2, 1923.....	*650,600.00
June 7, 1924.....	725,000.00
Dec. 6, 1924.....	*35,000.00
Feb. 12, 1925.....	900,000.00
Apr. 15, 1926.....	900,000.00
Feb. 23, 1927.....	*1,022,500.00
<b>Total.....</b>	<b>\$8,548,100.00</b>
2. Construction and maintenance of wagon roads, bridges, and trails, Alaska fund, act of Congress approved Jan. 27, 1905, as amended by an act approved May 14, 1906:	
Total receipts to June 30, 1920 (see detailed statement on p. 2106, Annual Report of the Chief of Engineers, 1920).....	
	\$2,128,569.89
Fiscal year—	
1920 (supplementary).....	153,805.19
1921.....	98,437.82
1922.....	135,975.05
1923.....	119,227.10
1924.....	115,803.20
1925.....	123,871.33
1926.....	137,431.66
1927.....	142,905.28
<b>Total.....</b>	<b>3,158,026.52</b>

<sup>1</sup> Exclusive of available funds.  
<sup>2</sup> For Fairbanks-Council Survey.  
<sup>3</sup> Includes \$600 for survey of Juneau wharf.  
<sup>4</sup> Deficiency to cover increase of compensation, 1925.  
<sup>5</sup> Includes \$22,500 for Juneau wharf.

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3. Increase of compensation, War Department:

Fiscal year—	
1918.....	\$145. 20
1919.....	-----
1920.....	-----
1921.....	940. 00
1922.....	4, 322. 09
1923.....	32, 846. 67
1924.....	56, 805. 54

Total..... \$95, 059. 50

4. National cemeteries:

Fiscal year—	
1925.....	\$302. 17
1926.....	300. 00
1927.....	800. 00

Total..... 1, 402. 17

5 Roads and trails, national parks:

Act of—	
Mar. 3, 1925.....	\$80, 000. 00
May 10, 1926.....	50, 000. 00
Jan. 12, 1927.....	16, 000. 00

Total..... 146, 000. 00

Total Federal appropriations..... 11, 946, 588. 19

CONTRIBUTED FUNDS

[Act of Congress approved June 30, 1921, Alaska special fund]

1. By the Territory of Alaska:

Fiscal year—	
1920.....	\$115, 517. 94
1921.....	113, 746. 61
1922.....	54, 737. 28
1923.....	112, 012. 88
1924.....	106, 325. 35
1925.....	78, 978. 45
1926.....	133, 499. 10
1927.....	88, 015. 76

Total..... \$802, 833. 37

2. By others:

Fiscal year—	
1922.....	\$1, 683. 77
1923.....	1, 379. 54
1924.....	4, 540. 00
1925.....	883. 12
1926.....	2, 819. 01
1927.....	5, 756. 63

Total..... 17, 062. 07

Total, contributed funds..... 819, 895. 44

Grand total, all funds..... 12, 766, 483. 63

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