

DEPARTMENT OF THE INTERIOR

ALBERT B. FALL, Secretary

UNITED STATES GEOLOGICAL SURVEY

GEORGE OTIS SMITH, Director

Bulletin 714

MINERAL RESOURCES OF ALASKA

REPORT ON PROGRESS OF
INVESTIGATIONS IN

1919

BY

ALFRED H. BROOKS AND OTHERS



WASHINGTON

GOVERNMENT PRINTING OFFICE

1921

CONTENTS.

	Page.
Preface, by A. H. Brooks.....	3
The future of Alaska mining, by A. H. Brooks.....	5
The Alaskan mining industry in 1919, by A. H. Brooks and G. C. Martin.....	59
Administrative report, by A. H. Brooks and G. C. Martin.....	97
Lode mining in the Juneau and Ketchikan districts, by J. B. Mertie, jr.....	105
Notes on the Salmon-Unuk River region, compiled by J. B. Mertie, jr.....	129
Water-power investigations in southeastern Alaska, by G. H. Canfield.....	143
Mining in Chitina Valley, by F. H. Moffit.....	189
Mining developments in the Matanuska coal fields, by Theodore Chapin.....	197
Lode developments in the Willow Creek district, by Theodore Chapin.....	201
Mineral resources of the Goodnews Bay region, by G. L. Harrington.....	207
Mining on Seward Peninsula, by G. L. Harrington.....	229
Index.....	239
Recent Survey publications on Alaska.....	I

ILLUSTRATIONS.

	Page.
PLATE I. Diagram showing value of mineral production of Alaska, 1880-1919..	6
II. Map of Alaska showing distribution of mineral resources.... In pocket.	
III. Diagram showing gold production of Alaska and the world, 1880-1919	8
IV. Map of mining claims, Funter Bay, Admiralty Island.....	112
V. Map of Salmon-Unuk River region.....	130
VI. Sketch map of Willow Creek district, showing location of mines and prospects.....	202
VII. Geologic sketch map of Goodnews Bay region.....	214
FIGURE 1. Diagram showing progress of Alaska copper-mining industry.....	13
2. Sketch map of part of Eska mine, Matanuska Valley, showing position of face of Shaw, Eska, and Martin workings, outcrops of coal beds, and structural relations.....	198

MINERAL RESOURCES OF ALASKA, 1919.

By ALFRED H. BROOKS and others.

PREFACE.

By ALFRED H. BROOKS.

This volume is the sixteenth of a series of annual bulletins¹ treating of the mining industry of Alaska and summarizing the results achieved during the year in the investigation of the mineral resources of the Territory. These reports are intended to give prompt publication of the more important economic results of the year. The time available for their preparation does not permit full office study of the field notes and specimens, and some of the statements made here may be subject to modification when the study has been completed. Those interested in any particular district should therefore procure a copy of the complete report on that district as soon as it is available.

This volume, like the others of the series, contains an account of the mining industry, including statistics of mineral production and also preliminary statements on investigations made by the Geological Survey. It is intended that this series of reports shall serve as convenient reference works on the mining industry for the years which they cover. It is not possible for a member of the Survey to visit every mining district each year, and therefore the information used in preparing the summary on mining development is in part obtained from other reliable sources.

During the war many members of the technical staff of the division of Alaskan mineral resources were called into the military service or employed in other war work. Owing to this transfer of personnel and because the Alaska investigations and surveys were not deemed to be directly important to the winning of the war, a reduction in the appropriation was made. Unfortunately the appropriation has not yet been restored to its prewar status. Meanwhile the cost of the field investigations has greatly increased. As a result many important

¹ The preceding volumes in this series are U. S. Geol. Survey Bulls. 259, 284, 314, 345, 379, 442, 480, 520, 542, 592, 622, 642, 662, 692, and 712.

surveys have had to be deferred, and this year's report is much smaller than those that have preceded it.

Again, as for many years in the past, the Geological Survey is under great obligation to residents of the Territory for valuable data. Those who have thus aided include the many mine operators who have made reports on production as well as developments. There are still some Alaskan mineral producers who fail to respond to requests for information. Many prospectors, Federal officials, engineers, and officers of transportation and commercial companies have contributed valuable data. It is impracticable to mention by name all who have aided in this work, but it should be stated that without the assistance of these public-spirited citizens the preparation of this report would have been impossible. Special acknowledgments should be made to the Director and other officers of the Mint; the officers of the Alaska customs service; the officers of the Alaskan Engineering Commission; the American Railway Express Co.; G. Howard Birch, of Nizina; F. E. Youngs, of Seward; R. N. Moyer and Sidney Anderson, of Anchorage; N. D. Bothwell, of the Willow Creek district; W. K. McLennan and R. E. Steel, of Chisana; John Elden, of Steel Creek; C. E. M. Cole, of Jack Wade; P. J. Hilliard, of Eagle; Charles Zielke, of Nenana; J. A. Fairborn, R. C. Wood, and the First National Bank, of Fairbanks; Charles Mayfield, of Richardson; Joshua L. Ray, of Healy River; M. T. Robinson, of Tofty; Alexander Mitchell, of Glen Creek, Kantishna; George W. Ledger, of Rampart; B. J. Bower, of Greenstone Creek, Ruby district; Herman Willeke, of Flat Creek, Ruby district; C. A. Boerner and C. E. Taylor, of Iditarod; Harry Madison, of Tolstoi; G. C. Glass and B. B. Smith, of Ophir; R. W. J. Reed and E. W. Quigley, of Nome; H. E. Carter, Thomas Aiken, and Charles Mespelt, of McGrath; William Loiselle and A. Stecker, of Kwinak; Lewis Lloyd, of Shungnak; George L. Stanley, of Kiana; and Volney Richmond, of the Northern Commercial Co.