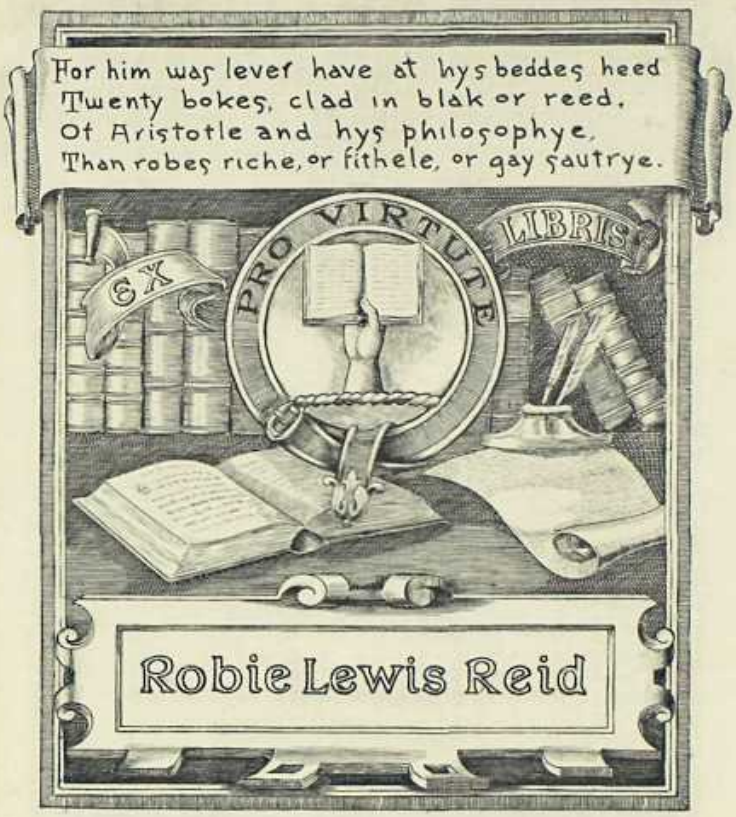

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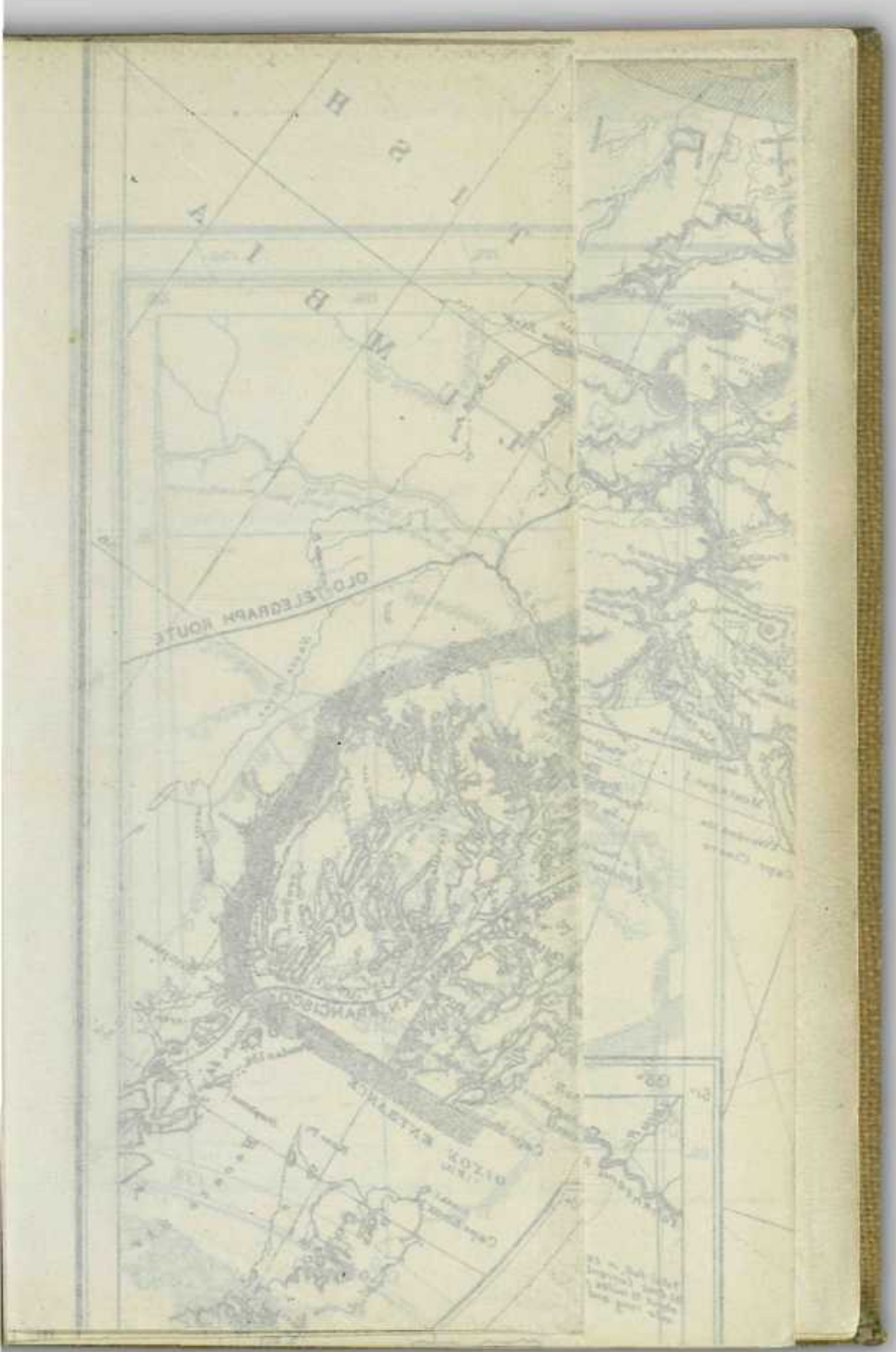

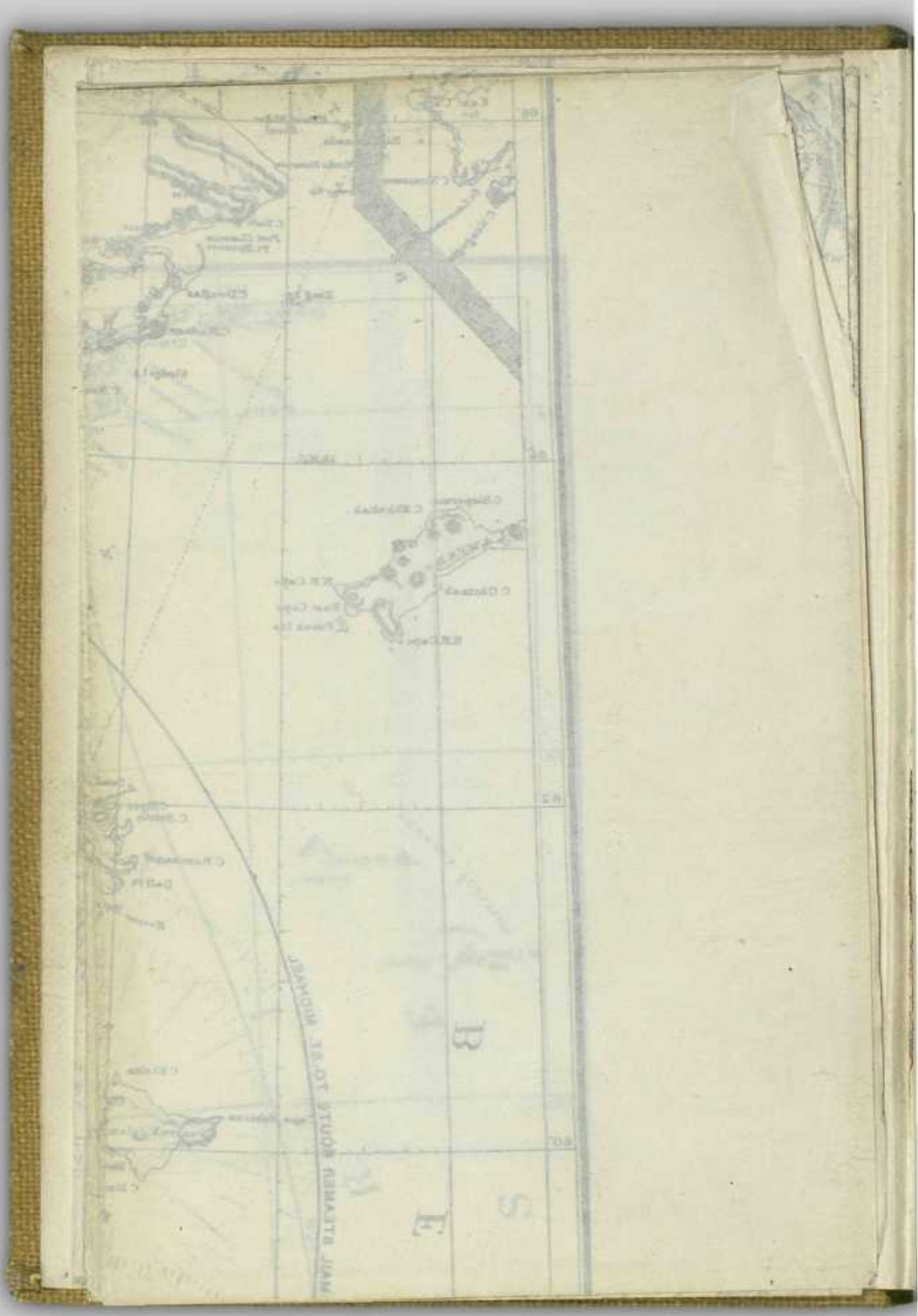

H. Stanley Wood Esq
From R Stephens James
with compliments
1912

MINERS' MANUAL

UNITED STATES, ALASKA, THE KLONDIKE

CONTAINING

ANNOTATED MANUAL OF PROCEDURE; STATUTES AND REGULATIONS; MINING REGULATIONS OF THE NORTHWEST TERRITORY, BRITISH COLUMBIA AND YUKON DISTRICT; GLOSSARY OF MINING TERMS, AND INFORMATION REGARDING ALASKA AND THE KLONDIKE

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INTRODUCTION.

This book is divided into four parts as follows:

Part I. consists of a Manual of Mineral Land Law of the United States, being a brief treatise upon the rights acquired by location, entry and patenting of public mineral lands, with a description of the various steps in the acquisition of title, with numerous citations. Those who wish a reference to all of the decisions upon the various points of this branch of the law, are referred to the Mineral Law Digest, compiled by the authors hereof, and published by the publishers of this book.

Part II. comprises the Mineral Land Statutes, with latest regulations thereunder, prescribed by the Department of the Interior.

Part III. is a set of forms for use in relation to the acquisition and transfer of title to mining claims, prepared by those whose aggregate experience in the handling of cases arising under the mineral land laws extends over thirty years. This part includes a Glossary of mining terms in general use.

Part IV. deals with Alaska and the Klondike region, their geographical and climatic features, traveled routes, mineral deposits and mining industries, Federal statutes and regulations having especial application to Alaska and the mining regulations of the Canadian Provinces, North West Territory, British Columbia, and Yukon District.

The information contained in this division has been drawn almost entirely from official sources, reports of government explorers, of the Governors of Alaska and other officials.

The subject of outfitting and transportation is also here treated.

Bound with the book, as a part of this division, is a map of Alaska and the Klondike, compiled from the latest government publications.

PART I.

MANUAL OF MINERAL LAND LAWS OF THE UNITED STATES.

MINERAL DISTRIBUTION.

The public mineral lands in the various States and Territories, with the exception of Wisconsin, Michigan, Minnesota,[1] Missouri, Kansas,[2] Alabama,[3] Oklahoma,[4] and Texas, are subject to exploration, occupation, and purchase under the mineral land laws of the United States.

The general Government has no ownership in the lands of Texas, the title thereto being in the State, by the terms of its admission into the Union, December 29, 1845. The second section of the joint resolution of Congress of March 1, 1845, provided among other things, that Texas "shall retain all the vacant and unappropriated lands lying within its limits," to be disposed of by the new State, first, in discharging its debts and liabilities, the residue to be disposed of for such purposes and in such manner as to the State should seem fit. The terms of this resolution having been accepted, Texas was admitted to the Union by joint resolution of Congress of December 29, 1845 (9 Stat., 108).

The State has a public land system of its own, under which its lands, both mineral and agricultural, are granted.

The public lands in the other States and Territories above mentioned are by the terms of the statutes disposed of as agricultural without reference to their real character, whether mineral or non-mineral.

1 Sec. 2345, U. S. Rev. Stat., page 158.
2 Act of May 5, 1876 (19 Stat., 52), page 159.
3 Act of March 3, 1883 (22 Stat., 487), page 160.
4 Sec. 16, Act of March 3, 1891 (26 Stat., 1026).

It may be added that the only minerals so far found in these States of any considerable value, are coal, iron, copper, lead and zinc.

The States and Territories in which the public domain is found to contain minerals, arranged as near as may be in the order of their importance in this particular, are Colorado, California, Montana, Alaska,[5] Idaho, South Dakota, Utah, Nevada, Arizona, New Mexico, Washington, Oregon, Wyoming, Arkansas, and North Dakota.

The Executive Department of the Government, charged with the sale of the public lands, obtains its information as to the character thereof chiefly through the representations of those who are seeking to acquire title under the laws. It is unable to advise interested inquirers as to the locality of valuable unappropriated mineral lands, for the reason that the discovery of such lands is invariably accompanied by an act of appropriation by the fortunate discoverer.

Outside of what is disclosed by the public records, the officials have no information not shared by the general public. These records represent the claims for which the Government title is asked. The public domain in States and Territories not specifically excepted by statute, is all open to exploration by the mineral prospector, and if found to contain valuable mines, to occupation and purchase under the general mining laws.[6] No lands are now withdrawn from settlement and entry under the agricultural land laws because believed to be mineral, and all such withdrawals made in the past by executive order, have been revoked.[7] The prospector is not restricted in his operations. He may explore any tract of unreserved public land.

The relative rights and privileges of rival claimants under the agricultural and mineral land laws, will be fully considered under the title Character of Land.

The Government can advise as to the status, whether appropriated on the records, and under what law, or

5 The production of gold in Alaska has increased largely in the past year or two. It is impossible, however, to give figures showing the amount as compared with the other States mentioned. It is thought that the relative production is about as indicated in the list.

6 Sec. 2319, U. S. Rev. Statutes, page 119.

7 Circular of April 27, 1880, Copp's Min. Lands, 2d Ed., 56.

whether unappropriated, of any specific tract, and maps can be compiled from the records showing all approved mineral surveys in any locality.

The discovery of mineral on a tract for which patent has issued, or for which entry has been made, under the general land laws, does not defeat the rights of the patentee or entryman, as the case may be. Minerals discovered on such lands belong to the proprietor of the soil. In many of the States government ownership of lands has long since been extinguished. The general Government never owned any of the lands of the original thirteen States. Many of the States and Territories are entirely agricultural in character.

RESERVATIONS.

Within the various public land States are many tracts of land, often of considerable extent, which are excepted from the operations of the general land laws, such as Indian reservations, National parks, forest reservations, military reservations and private land grants, confirmed and unconfirmed.

The Indian reservations, although numerous, are now of comparatively small area. These are being still further reduced by purchases from the Indians by the United States for the purpose of opening the lands thus acquired to disposal under the public land laws. Generally these lands are disposed of under any of the land laws applicable to the character thereof. An exception was made in recent legislation relative to portions of the San Carlos Indian reservation in Arizona (Act of June 10, 1896, 29 Stat. 360), and to portions of the Fort Belknap and Blackfeet Indian reservations in Montana (Act of June 10, 1896, 29 Stat. 353-357).

Briefly stated, these acts provide for the purchase of a portion of each reservation, the survey thereof, and thereafter their disposal under the mineral and coal land laws of the United States, with a preference right of purchase by those who, prior to the cession of the lands, had discovered and opened mines in good faith.[8]

The largest and most important Indian reservation

8 By the act of June 7, 1897 (30 Stat., 93), those portions of the acts named, granting a preference right of entry, were repealed.

within the United States is the Indian Territory. This has been much reduced in recent years by the purchase and opening to settlement of what is now called the Territory of Oklahoma.[9] Contrary to the usual rule, the lands in Oklahoma are subject to disposal only under the homestead and town site laws without regard to their actual character. Sec. 16, Act of March 3, 1891 (26 Stat. 1026).

The lands remaining in the Indian Territory are not subject to exploration, occupation and purchase under the mineral land laws, and parties entering thereon are liable to ejectment and prosecution as trespassers.

ALASKA.

By the act of May 17, 1884 (23 Stat. 24), the operation of the mineral land laws of the United States was extended to Alaska. The claimant has to pursue exactly the same course to acquire title to mineral lands there that he would pursue in other public mineral land States. The mineral land laws and regulations are printed on pages 119 to 171; and in Part IV. of this book may be found special information relative to Alaska and adjacent portions of the British Possessions.

NATIONAL PARKS.

The National Parks, such as the Yosemite in California, and the Yellowstone in Wyoming, were established for the purpose of preserving for the people, regions of great natural beauty. The mineral deposits therein are specifically reserved from the operation of the mineral land laws.[10]

FOREST RESERVES.

Within recent years a number of large reservations, called Forest Reserves, have been established, under the act of March 3, 1891 (26 Stat. 1103), by Executive proclamation, in the public land States and Territories, the primary purpose thereof being the pro-

9 Negotiations are now being conducted by authorization of Congress with the Indian nations in the Indian Territory, for the purpose of securing their consent to an abandonment of their present forms of government, and the opening of their surplus lands to settlement.

10 Act September 25, 1890 (26 Stat., 478); Act October 1, 1890 (26 Stat., 650).

tection of the water supply from diminution by the wanton and useless destruction of the forests in which the streams have their origin. These reservations, under the legislation providing for their establishment, were not subject to the operation of the land laws, but the act of February 20, 1896 (29 Stat. 11), permits the acquisition of mining claims in those reservations of this character in Colorado, and by the act of June 4, 1897,[11] the right was given to locate and hold mining claims in any forest reserve. This legislation provides for the preservation of the timber.

MILITARY RESERVATIONS.

As the necessity for the use thereof ceases, the various Military reservations are being restored to the public domain, the agricultural lands therein after survey to be disposed of under the act of July 5, 1884 (23 Stat. 103). The mineral lands in the reservations, however, become subject to occupation and purchase immediately upon the abandonment thereof by the War Department.

PRIVATE LAND GRANTS.

In those portions of the country acquired from Mexico, particularly in California, Arizona and New Mexico, exist large tracts of land granted to individuals by the Spanish and Mexican governments. They are called Private Land Grants, and under the treaty of cession the rights of the claimants are preserved. Since the acquisition of this Territory the United States has confirmed and patented many of these grants.

Many are still unconfirmed and unpatented, generally because of the difficulty of determining to the satisfaction of all interested the proper situation and extent of the land granted. Those finally adjusted have been disposed of in accordance with the terms of the grant, interpreted in the light of the laws of Mexico. These grants were generally pastoral grants, all minerals under the laws being reserved to the State. However, all patents issued by the United States were

11 30 Stats., 11-36.

absolute conveyances, the Government making no reservation of minerals therein.[12] Indeed, this has never been done in any case, the only exceptions and reservations contained in patents being those relating to easements, and those designed to protect the rights, under the law, of other private proprietors. Hence mineral claimants have no right to prospect and locate mining claims on such patented grants. They are private property, and the minerals therein belong to the owner under the patent. Neither have mining prospectors the right to explore and occupy any portion of the lands within the claimed limits of unconfirmed grants. Until finally adjudicated they are in a state of complete reservation and are excluded from the operation of the public land laws.

By the act of March 3, 1891 (26 Stat. 854), a court of private land claims was established for the purpose of adjusting all such grants. Section 13 of this act contains a declaration that all valuable minerals are reserved to the United States, and in effect directs the court to make a finding of facts relative to this particular if the point is raised. These grants are now being patented by the Land Department under the decrees of this court.

STATUS OF RESERVED LANDS.

Under his authority as Chief Executive, the President may establish reservations embracing unappropriated mineral lands, and such lands are not thereafter subject to location and purchase.[13]

It may, however, be stated as a general rule applicable to reservations of whatever character, with the exception of private land grants governed by the treaty with Mexico, that no rights acquired by citizens of the United States prior to the establishment of the reservation are affected thereby. Accordingly, mining locations regularly made prior to the reservation, and lawfully maintained, are private property, and the owner thereof may at any time take the steps

12 The cases of Moore v. Smaw and Fremont v. Flower, 17 Cal., 199; 12 Mor. Min. Rep., 418, contain an interesting history of the subject of private land grants and state the law as it was prior to the legislation above mentioned.

13 Fort Maginnis Case, 1 L. D., 552 (Op. Atty. Gen.).

necessary to secure the fee-simple title. It must be remembered, however, that this only applies to a location which was at such time fully perfected, and even a location of this character, if not maintained, would be treated as abandoned, and the land covered thereby would become a part of the reservation.[14]

TIDE LANDS AND LANDS ON NAVIGABLE STREAMS.

Lands below high-water mark on the tide lands and on the banks of navigable streams belong to the States in which they are situated, and the United States will not recognize mining claims thereon.[15] Whether lands are tide lands or whether streams are navigable, is a question of fact to be determined in each particular case.

The right to use such lands depends upon the local laws. A mining claim may extend across and cover the bed of a stream not navigable. If the claim is taken by legal subdivisions, the description thereof, according to the government survey, will control. In such a case, if the stream is meandered (that is, if the subdivisional surveys extend only to the banks and not across the stream), the ordinary rules as to riparian rights apply.

GRANTS TO STATES.

The United States has granted to the several States sections 16 and 36 in each township for the common schools, excepting such as are mineral, and for the acreage lost in this way the State may select an equal quantity of unappropriated lands as indemnity.[16] In lieu of a place granted of sections 16 and 36, the State of Nevada has been granted two million acres of public land.

These grants are adjusted in the following manner: The government surveyor, in running the lines of the

14 Belk v. Meagher, 104 U. S., 279; Gwillim v. Donnellan, 115 U. S., 45; Noyes v. Mantle, 127 U. S., 348; Hammer v. Garfield M. & M. Co., 130 U. S., 291.

15 Knight v. U. S. Land Association, and cases therein cited, 142 U. S., 161; Frank Burns, 10 L. D., 365.

16 Keystone Lode & Mill Site v. Nevada, 15 L. D., 259.

subdivisional surveys, is required to describe in his field notes the character of the lands over which his lines are extended. This statement is usually to be found in the "General Description" at the end of the field notes of the survey of each township, and is called the "return" of the surveyor. The public lands are prima facie of the character noted by the surveyor, and the State may select lands in lieu of those sections of its grant returned as mineral, or may, if it so elects, disprove the return under the regulations of the Department.[17] Although mineral lands are excepted from the grant, a time is fixed at which the State's title becomes absolute, if the land is not known at that time to be mineral in character: If the subdivisional survey was made prior to the admission of the State, this point of time is the date of the admission of the State to the Union; if such survey was made after the admission of the State, the grant to the State becomes absolute at the date of the approval of the survey if the lands were not then known to be mineral.

In case an application for patent for a mining claim is presented covering any lands within sections 16 or 36, returned as non-mineral, if an examination of the same discloses that the claim was located prior to the date when the State's right attached, if at all, the application is received and placed of record, and the proper State official notified and allowed a certain time to show cause why patent should not be issued on such mineral application.

Should the application disclose that the mining claim was located after the date when the grant became effective, if at all, the mineral claimant is required to make a prima facie ex parte showing that the land claimed by him was known to be mineral at or prior to the established date. Should such showing be made, a rule is laid upon the State to show cause as above noted, but should the mineral claimant fail to make out a prima facie ex parte case, his application is finally rejected.

In all cases where the State fails to appear and make objection after due notice, the application for mineral patent is passed in this particular; but if a showing is

17 Paragraphs 103 et seq., page 167.

made which raises the issue, a "hearing" or trial before the local land office is had to determine the question: Was the land known to be mineral in character at the date the grant to the State took effect, if at all?

GRANTS TO RAILROADS.

The United States has also granted to many railroad corporations immense quantities of land, in alternate sections on each side of its road, from five to forty miles in width, mineral lands, other than those valuable for coal and iron, being excepted.

The exception is effective as to all lands found to be mineral at any time prior to the date of patent, or certification.[18]

Of these granted alternate sections the companies make lists of selections, describing the tracts according to the government subdivisional surveys. These lists are filed in the local land office and forwarded to the General Land Office, where they are critically examined. A clear list is then made up of unappropriated lands not returned as mineral or alleged to be such, which list is transmitted to the Secretary of the Interior for patenting under the law.

Under the practice a list is prepared of all the lands returned, or claimed as mineral or alleged to be such, as well as all lands within six miles of mining claims, and notice of the selection of said lands is required to be published thirty days, after which testimony is submitted at the local land office as to the character thereof. Any person having claims, or who is familiar with the character of the lands published, is invited to appear and testify concerning the same.

Inasmuch as many mining claims are held under possessory title only, and there is no record thereof in the Land Department, claimants are at fault if they do not advise the Government of their claims. A brief letter addressed to the Commissioner of the General Land Office, giving the section, township and range, will be sufficient to prevent any final disposition of the land to a railroad company until the one alleging the mineral character of the land has an op-

18 Barden v. N. P. R. R. Co., 154 U. S., 288 (citing and approving C. P. R. R. Co. v. Valentine, 11 L. D., 238). This is true as to all grants of like character.

portunity to be heard. The better plan, however, is for the mining claimant to keep himself informed of the status of the land by frequent examinations of the records of the local land office, or those of the General Land Office, and, upon the filing of any selection list covering the tract in which he is interested, to immediately file a duly corroborated protest under oath, setting forth the nature of his claim. This would insure the adjudication of all claims prior to any final disposition of the land.[19]

The grant to the Northern Pacific Railroad Company in Montana and Idaho is being adjusted, as to the mineral character of the lands, under the act of February 26, 1895, and claimants must protect their rights in accordance with the terms thereof.[20]

AS TO THE CHARACTER OF LAND.

By Section 2318, United States Revised Statutes, all "lands valuable for mineral shall be reserved from sale, except as otherwise expressly directed by law."[21] Act of July 4, 1866 (14 Stat. 86), re-enacted May 10, 1872 (17 Stat. 91).

It has been held that the character of land is open to question until the issuance of final certificate of entry for an agricultural claim, but that a discovery of valuable mineral after the date of such certificate will not affect the title under the agricultural entry.[22]

According to Section 2319, United States Revised Statutes, all public lands in the States subject to the mining laws are open to exploration, occupation and purchase under these laws if mineral.

The miner has, therefore, the right to prospect, even though his operations are carried on upon land settled and improved and claimed as agricultural, pro-

19 See Departmental circular of July 9, 1894 (19 L. D., 21), and paragraphs 103 to 113, inclusive, of the mining circular approved December 15, 1897, pages 167 to 170.

20 Circular Instructions, 20 L. D., 350; Sweeney v. N. P. R. R. Co., 21 L. D., 65.

21 Davis' Adm'r v. Weibbold, 139 U. S., 507, and cases therein cited: Deffeback v. Hawke, 115 U. S., 392; Sparks v. Pierce, 115 U. S., 408.

22 Deffeback v. Hawke, 115 U. S., 392; Sparks v. Pierce, 115 U. S., 408.

vided final agricultural entry has not been made. He has no right to damage the improvements of the agricultural claimant, or to interefere with his legitimate use of the land for such purposes.[23]

Should the agricultural claimant believe himself damaged by the acts of miners or prospectors, he should apply to the local courts for relief. The executive branch of the Government will not exercise jurisdiction to settle disputes relative to the right of possession between rival claimants. It is only when one or the other seeks to acquire the legal title that action will be taken by the Department of the Interior, and then only to determine to whom, under the law, patent should issue. To illustrate: When an agricultural claimant submits final proof, he is required to make a prima facie showing that the land claimed by him is non-mineral. If the proof on this point is not disputed and there is compliance with law in other particulars, his final entry is allowed as a matter of course. Should it be alleged, however, that the land is mineral, by affidavits duly corroborated, a "hearing" to determine this issue, at which both parties to the controversy may appear and submit testimony, is held, and thereafter such decision is rendered as may be warranted by the facts disclosed.[24] It often happens that protests, alleging the mineral character of lands, are filed after final agricultural entry has been allowed thereon. To raise an issue, such protests must be to the effect that the lands were of known mineral value prior to the date of final agricultural entry. Likewise an agricultural claimant may contest an application for mineral patent, and it may be stated as a general rule that the Department will not take any measures to determine the character of the public lands, whether mineral or non-mineral, until an application for a grant of the legal title thereto is submitted.[25]

It should be remembered in this connection that jurisdiction to determine the character of the public lands is vested exclusively in the Executive, acting

23 McClintock v. Bryden, 5 Cal., 97; Clark v. Duval, 15 Cal., 85; Lentz v. Victor, 17 Cal., 271.

24 Caribou Lode, 24 L. D., 488.

25 C. P. R. R. Co., 8 L. D., 30.

through the Land Department, the judgment of which is final.[26] The courts may determine the right of possession. Such action, however, does not carry with it the legal title, although the right of possession and the right to the legal title may be in the same individual.

A valid location of mineral land confers a vested right, and the mining claimant whose land has been patented to a railroad company, to a State, or to an individual as non-mineral through mistake, or upon fraudulent representations, may still by a direct proceeding in the courts have his rights enforced as against the patentee.

It may be stated that in all cases where the government is under equitable obligations to protect the rights of the aggrieved party, it will institute proceedings in a court of equity to have the improvidently issued patent set aside, to the end that it may thereafter grant the legal title to the one to whom it rightfully belongs.[27]

LOCATION.

Under the statute (Sec. 2320, U. S. Rev. Stat.) the first step in the acquisition of title to the mineral lands of the United States is discovery, the second, location, the third, performance of annual labor, commonly called "assessment work," and the fourth and last, entry or purchase.

The first three confer upon the miner a conditional or qualified title subject to forfeiture by failure to comply with the conditions; the last, if there be no defect or irregularity in the proceedings, vests in the claimant a title which the Government is bound to carry into patent. The first title is possessory, the second equitable, and the patent carries with it the whole title of the Government.

Under the mining laws of Congress every valid lo-

26 Johnson v. Towsley, 13 Wall., 72; Shepley v. Cowan, 91 U. S., 330; Moore v. Robbins, 96 U. S., 530; Quinby v. Conlan, 104 U. S., 420; St. Louis Sm. Co. v. Kemp, 104 U. S., 636; Steel v. St. Louis Sm. Co., 106 U. S., 447; Lee v. Johnson, 116 U. S., 48; Aiken v. Ferry, 6 Sawy., 79; Aurora Hill M. Co. v. 85 M. Co., 12 Sawy., 355; Talbott v. King, 6 Mont., 76.

27 United States v. Stone, 2 Wall., 525; (Quoted approvingly in Mullan v. United States, 118 U. S., 271); Chicago Quartz Mine v. Oliver, 75 Cal., 194.

cation of a mining claim is accompanied by the right to the exclusive possession and enjoyment of the soil of such claim. This right is not a mere easement. Upon complying with the terms and conditions of said laws the locator may have an absolute conveyance of the property.[28]

The holder of a possessory title under the mining laws is not bound to apply for patent, or to pay for the use of the land. "The miner having located his claim, is to be treated as an express licensee of the United States and independent of a purchase from the Government of his mining claim, he has, upon compliance with the terms of the act a right to appropriate the minerals therein contained. A title in fee by patent is offered him, which he may at his pleasure accept or reject." There is no time prescribed within which he shall apply for a patent.[29]

So long as he relies upon his possessory right, however, his title is somewhat uncertain, and he may lose a valuable property through the negligence or bad faith of his agents. The valid location of a mining claim is a grant from the Government to the person making the location. The location is the inception of the grant, and the patent is its consummation. The grant is kept alive by representation (work). A failure to represent forfeits the grant and makes void the title acquired by location, and the ground thereupon becomes again subject to location and purchase.[30]

If the ground claimed has not already been appropriated by a prior claimant, and is of the character alleged, by the successive steps of discovery, location and annual expenditure, the miner has acquired a vested right, a property capable of being transferred, sued for, etc., as other real estate, subject only to the paramount title of the United States, and the courts will protect him in the full and free enjoyment thereof.

Locators of mining claims, so long as they comply with the law, have "the exclusive right of possession

28 Silver Bow M. & M. Co. v. Clark, 5 Mont. 378; Talbott v. King, 6 Mont., 76.

29 Wolfley v. Lebanon M. Co., 4 Colo., 112; Chapman v. Toy Long, 4 Sawy., 28; Lebanon M. Co. v. Cons. Republican Mtn. M. Co., 6 Colo., 371; Gold Hill Quartz M. Co. v. Ish, 5 Oreg., 104.

30 Renshaw v. Switzer, 6 Mont., 464.

and enjoyment of all the surface included within the lines of their locations." This is a right of property, and the claimant must protect himself from trespassers by proceedings in court.[31] Mining claims held by possessory title are property in the fullest sense of the word, and may be sold, transferred, mortgaged and inherited, and a location made in accordance with law has the effect of a grant by the United States of the right of present and exclusive possession.[32]

The estimated mineral area is sixty-five million acres. Since the passage of the first mining law twenty-nine thousand patents have been issued, covering on an average probably twenty-five acres each, and it is estimated that there are at this time between four and five hundred thousand valid mineral locations. According to this estimate the greater number of miners prefer to hold their claims under possessory title.

The laws of the different States and Territories, and the regulations of the various mining districts, differ greatly as to what constitutes a discovery of valuable mineral, and the courts are no more uniform in their opinions on this subject. But something must be found in place, as rock, clay or earth, so colored, stained, changed and decomposed by the mineral elements as to mark and distinguish it from the inclosing country.[33] On this subject the courts have said:

"A vein is discovered when there is disclosed a well-defined body of rock in place carrying gold, which body subsequently proves to be continuous." The only line of demarkation between the vein and the country rock may be the commencement of the rock to bear mineral. Regular, well-defined and easily-distinguished walls are not essential to the existence of the vein. It is not necessary that the ore found shall be 'pay ore,' for what is waste to-day may, with changed surrounding circumstances, prove to

31 Lewis Smith, 1 L. D., 615.

32 Forbes v. Gracey, 94 U. S., 762; Belk v. Meagher, 104 U. S., 279. (See 3 Mont., 65; 1 Mor. Min. Rep., 510). Gwillim v. Donnellan, 115 U. S., 45; Noyes v. Mantle, 127 U. S., 348; Manuel v. Wulff, 152 U. S., 505; Sullivan v. Iron Silver M. Co., 143 U. S., 431.

33 Burke v. McDonald, 2 Idaho, 646.

be 'pay ore' to-morrow."[34] "The law will not distinguish between different kinds and classes of ores, if they have appreciable value in the metal for which the location was made. Nor is it necessary that the ores shall be of economical value for treatment. It is enough that it is something beyond a mere trace which can be positively and certainly verified as existing in the ore."[35]

The National statute merely requires that a discovery of valuable mineral be made, and any evidence which establishes the existence of a vein or lode of quartz or other rock in place carrying one or more of the minerals, or of a placer deposit valuable as a mine, would be satisfactory.

The statutes of the United States, however, in matters affecting the possessory title (Secs. 2320 and 2324, U. S. Rev. Stat.), recognize the right of the State or Territory or Mining District to make laws or regulations determining the details of discovery, location and annual labor within certain limitations. These limitations are: (1) That the location must be distinctly marked on the ground so that its boundaries may be readily traced; (2) that all records of mining claims shall contain the name or names of the locators, the date of the location, and such a description of the claim or claims located, by reference to a natural object or permanent monument, as will identify the same; and (3) that on each claim located at least one hundred dollars' worth of labor shall be performed or improvements made during each year.

Mining district rules are a part of the law of the land,[36] and the customs of miners constitute the common law of mining, and have been recognized by National and State statutes and by the courts, when rea-

34 Golden Terra M. Co. v. Smith (Mahler), 2 Dak., 377.

35 Stevens v. Williams, 1 McCrary, 480. (Quoted in Shreve v. Copper Bell M. Co., 11 Mont., 309). Cases cited: Erhardt v. Boaro, 113 U. S., 527; 4 Mor. Min. Rep., 432; Iron Silver M. Co. v. Cheesman, 116 U. S., 529; Eureka Case, 4 Sawy., 302; North Noonday M. Co. v. Orient M. Co., 1 Fed. Rep., 522; Jupiter M. Co. v. Bodie Cons. M. Co., 11 Fed. Rep., 666; *Harrington v. Chambers*, 3 Utah, 94. (*See* 111 U. S., 350); Territory v. Mackey, 8 Mont., 168; Merrill v. Dixon, 15 Nev., 401.

36 Morton v. Solambo M. Co., 26 Cal., 527; Gropper v. King, 1 Pac. Rep., 755.

sonable in themselves and not in conflict with any higher law.[37] Congress recognized the possessory right of miners under the rules of the mining districts, but in doing this it has not parted with its title to the land.[38]

The order in which mining laws are authoritative are: first, National; second, State or Territorial; and third, Mining District; and the last two are of no effect if they attempt to regulate matters in which jurisdiction is not conferred by the sections of the mining act heretofore named. To be of effect a mining district regulation must be in accordance with the laws of the United States and of the State; must have been established and must be in force, as it does not, like a statute, acquire validity by its mere enactment, but from the customary obedience and acquiescence of the miners, after its enactment.[39] The jurisdiction of the State or the mining district is limited to laws and rules affecting the extent and manner of working mining claims.[40]

The miner having made a discovery, and being desirous of securing the same to himself, should therefore inform himself as to all such laws and proceed in compliance therewith. Should there be a conflict of law or of regulation, he should be governed by that of highest authority.

MINING DISTRICTS.

It may be well at this place to note briefly the origin, method of organization and jurisdiction of the local mining district.

Long before there was any National legislation relative to the mineral lands upon the public domain, systems of local mining laws, growing out of the necessities of the miners, had been established where rich mineral discoveries had brought together large numbers of prospectors. These regulations were framed to fit the needs of each particular locality. It has been

37 Upton v. Larkin, 7 Mont., 449; S. C., 5 Mont., 600; Rosenthal v. Ives, 2 Idaho, 244.

38 Forbes v. Gracey, 94 U. S., 762.

39 North Noonday M. Co. v. Orient M. Co., 1 Fed. Rep., 522.

40 Territory v. Lee, 2 Mont., 124.

said: "The Land Department of the government, and this court also, have always acted upon the rule that all mineral locations were to be governed by the local rules and customs in force at the time of the location, when such location was made prior to the passage of any mineral law by Congress."[41]

This matter of local organization had its greatest development in California, and the regulations adopted in other sections of the country were largely modeled upon the California methods.

Many mining district organizations were in existence at the date of the mining act of May 10, 1872, and Congress therein recognized them and authorized their continuance.[42] It is not seen, however, what good purpose is subserved by the perpetuation thereof. All of the mining States have adopted more or less complete mining codes, and the organization of local mining districts is gradually being abandoned. It would seem that since the passage of the United States mining statutes, and the legislation supplemental thereto by State legislatures, there exists no necessity for the local mining district, and the process of acquiring title to the public mineral lands would be relieved of many vexatious complications if the organization thereof were abandoned altogether.

The general government has no jurisdiction over mining districts; it exercises no supervision over the regulations thereof, and when an application for patent is presented, if the proceedings appear to be in accord with the United States statutes, the case is passed unless it be specifically alleged that some material and valid State law or mining district regulation has been ignored or violated by the claimant. In such event an investigation might be made and such action be taken as the facts warrant. The Land Department cannot interfere in disputes between miners as to the affairs of a mining district. Its sole duty is to recognize the local laws when not in conflict with statutes, State and National.[43]

41 Glacier Mtn. S. M. Co. v. Willis, 127 U. S., 471. (Citing Jennison v. Kirk, 98 U. S., 453; Broder v. Natoma Water & M. Co., 101 U. S., 274; Jackson v. Roby, 109 U. S., 440; Chambers v. Harrington, 111 U. S., 350).

42 See Sec. 2324 U. S. Rev. Stat., p. 124.

43 Com'r to J. N. Barker, Jan. 9, 1892.

However, should the miners of any community deem it necessary or desirable to establish an organization of this kind, a common form of procedure is to call a public meeting for that purpose. This meeting should adopt a set of rules prescribing the officers of the district and defining their duties; fixing the boundaries of said district and giving a name thereto, and regulating the "location, manner of recording, and the amount of work necessary to hold possession of a mining claim," within the limitation of the statute. The officers provided for by the regulations should then be elected, and will thereafter discharge the duties prescribed. The principal officer of a mining district is the Recorder, whose duty it is to make a record of all locations, and of all other papers affecting the title to mining claims within the district. The General Land Office will not instruct mining recorders relative to their rights or duties.[44]

Inasmuch as the district organization is apt to be abandoned, and the books lost or destroyed, it sometimes becomes a matter of much difficulty to furnish a complete chain of title by means of a proper abstract, and claimants are frequently forced to establish title by proceeding under section 2332, United States Revised Statutes. All State governments have legislated with great care on the general subject of real property, and have provided that all transactions affecting the title thereto shall be made a matter of public record, usually with the county recorder, in permanent volumes of records provided for that purpose, and kept in a safe place. Were it a general requirement that all papers affecting titles to mining claims be recorded with the county recorder, it would be possible at any time to procure an abstract showing the condition of any title.[45]

LODE LOCATIONS.

The miners acquire a complete possessory title by discovery, location and continued possession by the performance of the annual labor prescribed by statute. This possession does not necessarily mean actual physical occupancy of the premises, and the several

44 Com'r to J. O. Fain, Jan. 18, 1892.

45 See paragraph 76, page 150.

acts of appropriation named may be performed by an agent.

A valid location may be made by one acting as agent for another,[46] and the acts required as evidence of possession of mining claims are those usually done. This possession may be held by the miner's agents or servants.[47]

The statute of the United States merely prescribes that prior to the location of a mining claim a discovery of valuable mineral shall be made.[48] Many of the States and Territories require the discoverer to sink a discovery shaft, and in those States in which no fixed time is prescribed, a reasonable time is allowed within which to complete the location.[49]

The location should be laid along the strike or course of the vein, and as the law allows but three hundred feet on each side of the center of the vein, the location of the claim is void as to any excess over that amount.

A vein need not necessarily crop out on the surface in order that a location may be properly laid upon it; but where the vein does crop out along the surface, or is slightly covered by foreign matter, so that the course of the apex can be readily ascertained, this course should be substantially followed in laying claims and locations upon it.[50]

The top or apex of the vein must be within the claim located, otherwise the claimant will have no right to

46 Gore v. McBrayer, 18 Cal., 582; Morton v. Solambo M. Co., 26 Cal., 527; Murley v. Ennis, 2 Colo., 300; Kramer v. Settle, 1 Idaho, 485; Schultz v. Keeler, 2 Idaho, 305; Dunlap v. Pattison, 42 Pac. Rep., 504.

47 English v. Johnson, 17 Cal., 107; Strepy v. Stark, 7 Colo., 614.

48 Jackson v. Roby, 109 U. S., 440; Jupiter M. Co. v. Bodie Cons. M. Co., 11 Fed. Rep., 666; McGinnis v. Egbert, 8 Colo., 41; Bryan v. McCaig, 10 Colo., 309; Burke v. McDonald, 2 Idaho, 645; Golden Terra M. Co. v. Smith (Mahler), 2 Dak., 377; Upton v. Larkin, 7 Mont., 449; S. C., 5 Mont., 600; 6 Pac. Rep. 66; Gleeson v. Martin White M. Co., 13 Nev., 442; Overman Silver M. Co. v. Corcoran, 15 Nev., 147; Waterloo M. Co. v. Doe, 17 L. D., 111; Etling v. Potter, 17 L. D., 424; Winter Lode, 22 L. D., 362.

49 Electro-Magnetic Co. v. VanAuken, 11 Pac. Rep., 80; Erhardt v. Boaro, 113 U. S., 527; Murley v. Ennis, 2 Colo., 300; Patterson v. Hitchcock, 3 Colo., 533; Gleeson v. Martin White M. Co., 13 Nev., 442.

50 Flagstaff S. M. Co. v. Tarbett, 98 U. S., 463.

work the vein on its dip outside of the surface lines of his claim.

Section 2322, United States Revised Statutes, gives to the owner of the apex of a vein or lode not only all that is covered by the surface lines of his claim as those lines are extended vertically, but it gives him the right to possess and enjoy the lode or vein by following it on the dip when it passes outside of these vertical lines laterally.[51]

The end lines of the claim must be parallel. Within these limitations as to width and parallelism of end lines, the claim may assume any form the miner finds desirable or necessary. It may take the full width, six hundred feet, at one end and be extremely narrow at the other. Great care should be exercised in the matter of end lines. While, according to some of the decisions, a claim might be patented with non-parallel end lines, yet such a condition would prevent the claimant working the vein should it dip beyond his side lines—a very important consideration in most cases. It was said by the United States Supreme Court in the case of Iron Silver Mining Co. v. Elgin Mining and Smelting Co.:[52]

"Under the act of 1866 (14 Stat., 251), parallelism in the end lines of a surface location was not required, but where a location has been made since the act of 1872, such parallelism is essential to the existence of any right in the locator or patentee to follow his vein outside of the vertical planes drawn through the side lines. His lateral right by statute is confined to such portion of the vein as lies between such planes drawn through the end lines and extended in their own direction; that is, between parallel vertical planes. It can embrace no other portion."

Non-parallelism of the end lines will not defeat the right of the locator on the apex of a lode to follow the lode on its dip, if the end lines converge in the direction of the dip, as the non-parallelism in that case would only operate to restrict the rights of the claimant.[53]

51 Iron Silver M. Co. v. Cheesman, 116 U. S., 529; Iron Mine v. Loella Mine, 3 Fed. Rep., 368. (Also reported as Iron Silver M. Co. v. Murphy, 1 Mor. Min. Rep., 548).

52 118 U. S., 196.

53 Carson City G. & S. M. Co. v. North Star M. Co., 73 Fed. Rep., 597.

If the claim is a vein or lode claim the locator is permitted to take a tract fifteen hundred feet long by six hundred feet wide by the United States statute, unless limited by prior adverse rights. This width is in some places limited by State statute. The Colorado statute limits the width to one hundred and fifty feet in Gilpin, Clear Creek, Boulder and Summit counties, and to three hundred feet in the other counties of the State. In the other States and Territories the full width of six hundred feet is allowed, unless there is a limitation prescribed by mining district rules.

The definition of a lode given by geologists is that of a fissure in the earth's crust filled with mineral matter, or, more accurately, an aggregation of mineral matter, containing ores in fissures.[54] A vein is an "aggregation of mineral matter in fissures of rock."[55]

The courts have defined veins or lodes in this language: "A vein or lode authorized to be located is a seam or fissure in the earth's crust filled with quartz or some other rock in place carrying gold, silver, or other valuable mineral deposits named in the statute; it may be very thin and it may be many feet thick, or thin in places, almost or quite pinched out, in the miner's phrase, and in other places widening out into extensive bodies of ore. So also, in places, it may be quite or nearly barren, and at others be immensely rich. It is only necessary to discover a genuine mineral vein or lode, whether small or large, rich or poor, at the point of discovery within the lines of the claim located, to entitle a miner to make a valid location, including the vein lode. It may, and often does, require much time and labor and expense to develop the vein or lode, after discovery and location, sufficiently to determine whether there is a really valuable mine or not, and a location would be necessary before incurring such expenses in developing the vein, to secure to the miner the fruits of his labor and expense in case a rich mine should be developed."[56] "A fissure in the earth's crust, an opening in its rocks and strata made by some force of nature in which the mineral

54 Van Cotta on Ore Deposits, Primes' Trans., 26.
55 Bainbridge on Mines, p. 2.
56 North Noonday M. Co. v. Orient M. Co., 1 Fed. Rep., 522.

is deposited, would seem to be essential to a lode in the judgment of geologists. But to the practical miner the fissure and its walls are only of importance as indicating the boundaries within which he may look for and reasonably expect to find the ore he seeks. A continuous body of mineralized rock lying within any other well-defined boundaries on the earth's surface and under it would equally constitute, in his eyes, a lode. We are of opinion, therefore, that the term as used in the acts of Congress is applicable to any zone or belt of mineralized rock lying within boundaries clearly separating it from the neighboring rock."[57]

A location of more ground than is allowed by law is void only as to the excess.[58] The local mining district regulations may limit the width to twenty-five feet on each side of the middle of the vein, and a location embracing more than the width allowed by law or regulation on each side of the middle of the vein is void as to the excess but not in its entirety.[59] It has been held that: "However tortuous might be the course of the lode, the claimant had a perfect right to follow it up and prepare his diagram so as to include it, together with the surface ground on each side thereof allowed by local laws. There is no language in the act that requires the diagram to be in the form of a parallelogram or in any particular form."[60]

END LINES.

Each locator is entitled to follow the dip of his lode or vein to an indefinite depth, though it carries him outside of the side lines of his location; but this right

57 Iron Silver M. Co. v. Cheesman, 116 U. S., 529.

58 Flagstaff S. M. Co. v. Tarbett, 98 U. S., 463; Richmond M. Co. v. Rose, 114 U. S., 576; Jupiter M. Co. v. Bodie Cons. M. Co., 11 Fed. Rep, 666; Terrible M. Co. v. Argentine M. Co., 5 McCrary, 639; Thompson v. Spray, 72 Cal., 528; Atkins v. Hendree, 1 Idaho, 95; Stemwinder M. Co. v. Emma & Last Chance Cons. M. Co., 2 Idaho, 421; Burke v. McDonald, 2 Idaho, 646; Rose v. Richmond M. Co., 17 Nev., 25; Hansen v. Fletcher, 10 Utah, 266; Doe v. Sanger, 83 Cal., 203; T. M. Empy, 10 C. L. O., 102. (Questioned in Hanswirth v. Butcher, 4 Mont., 299).

59 Jupiter M. Co. v. Bodie Cons. M. Co., 11 Fed. Rep., 666.

60 Wolfley v. Lebanon M. Co., 4 Colo., 112.

is based on the hypothesis that the side lines substantially correspond with the course of the lode or vein at the surface; and it is bounded at each end by the end lines of the location crossing the lode or vein, and extended perpendicularly downward indefinitely in their own direction.[61] "Under the act of 1866 (14 Stat., 251), parallelism in the end lines of a surface location was not required; but where a location has been made since the act of 1872, such parallelism is essential to the existence of any right in the locator or patentee to follow his vein outside of the vertical planes drawn through the side lines. His lateral right by the statute is confined to such portion of the vein as lies between such planes drawn through the end lines and extended in their own direction, that is, between parallel vertical planes. It can embrace no other portion."[62]

If the end lines are not parallel to each other the location is not void, but the locator has no right to the vein outside of intersecting vertical planes drawn downward through his side and end lines. A location may, however, be amended so as to make the end lines parallel if no adverse right has intervened.[63] The extralateral right to work lodes other than the one specifically located is governed by the same rule as the one governing the lode on which the location is based.

When a mining claim is located across instead of along the strike or course of a vein, the side lines become end lines for the purpose of determining the right of the claimant to follow his lode on its dip.[64]

To illustrate: In the diagram (Figure 1) the lines A-B and C-D are the end lines of the claim as located. If the lode is found, however, to run in the course indicated on the diagram, the side lines A-C and B-D would be considered as the real end lines.

When the lode leaves one side line only, however, the matter becomes more difficult; but it has been held

61 Flagstaff S. M. Co. v. Tarbett, 98 U. S., 463.

62 Iron Silver M. Co. v. Elgin M. & Sm. Co. (Horseshoe Case), 118 U. S., 196.

63 Doe v. Waterloo M. Co., 54 Fed. Rep., 935; Doe v. Sanger, 83 Cal., 203.

64 Argentine M. Co. v. Terrible M. Co., 122 U. S., 478.

that, for the purpose of defining the claimant's right to follow his lode on the dip, a new end line will be drawn through the point where the lode intersects the side line and passes from the claim, parallel with the

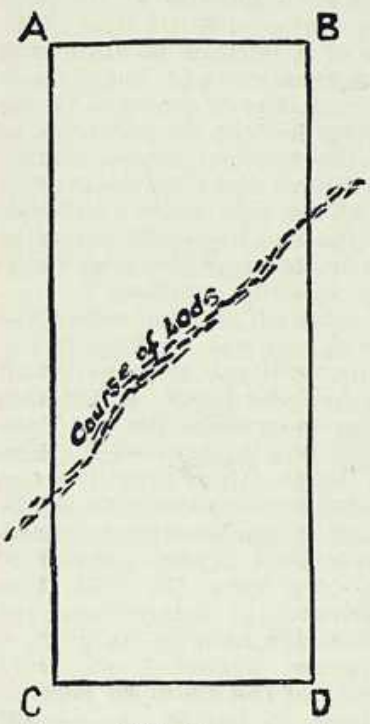


Fig. 1.

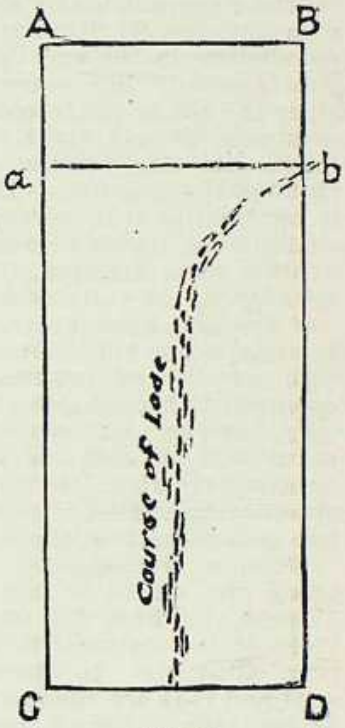


Fig. 2.

other end line, as indicated by the end line a-b on the above diagram[65] (Fig. 2).

It was said, in substance, in the case of King v. Amy & Silversmith M. Co., however, that where a location is so imperfect as not to give the locator all possible rights under the law, the court cannot relocate the claim; the most it can do is to give the claimant such rights as his location warrants.[66]

On this subject see also Apex-Dip.

65 Eureka Cons. M. Co. v. Richmond M. Co., 4 Sawy., 302.
66 152 U. S., 222.

POSTING OF LOCATION NOTICE.

Upon making a discovery the prospector should post a notice at the discovery point briefly describing his claim, and claiming the time allowed by State statute or mining district regulation for perfecting his location, giving his name and the date. No particular form of notice or manner of posting is required in any of the States. The purpose of this notice is to protect the miner while he proceeds to take the other steps prescribed by State law to complete his location.

The United States law does not require the posting or recording of a location notice, but recognizes the power of miners to require such notice to be recorded; but the mere recording of a notice, before a location is made on the ground, is a nullity.[67]

A location notice must be posted at the discovery point under the Colorado law.[68]

The Montana statutes require the notice of location to be posted at the discovery point. But the fact that no mineral was found at the point where the notice was posted does not invalidate the location if mineral has been discovered elsewhere on the claim.[69]

A locator who posts a notice on his claim has a reasonable time within which to mark the boundaries, and if he does this, he cuts out any adverse rights which were initiated between the dates of posting his notice and marking his claim.[70]

The erection of a discovery stake and posting of a notice is sufficient to protect the discoverer's rights during the time allowed by the Colorado statutes for completing a location.[71]

The next step is to sink the discovery shaft or other working noted above.

As to the effect of posting, it has been said: "A mere posting of notice on a ridge of rocks cropping out of the earth, or on other ground, that the poster

67 Gregory v. Pershbaker, 73 Cal., 109; Book v. Justice M. Co., 58 Fed. Rep., 106; Allen v. Dunlap, 24 Oreg., 229.

68 McCaig v. Bryan, 10 Colo., 309.

69 O'Donnell v. Glenn, 8 Mont., 248.

70 Doe v. Waterloo M. Co., 70 Fed. Rep., 455; Burke v. McDonald, 2 Idaho, 1022.

71 Erhardt v. Boaro, 2 McCrary, 141. See 113 U. S., 527, to same effect.

has located thereon a mining claim, without any discovery or knowledge on his part of the existence of metal there, or in its immediate vicinity, would be justly treated as a mere speculative proceeding, and would not itself initiate any right. There must be something beyond a mere guess on the part of the miner to authorize him to make a location which will exclude others from the ground, such as the discovery of the presence of precious metals in it, or in such proximity to it as to justify a reasonable belief in their existence. Then protection will be afforded to the locator to make the necessary excavations and prepare the proper certificate for record. It would be difficult to lay down any rules by which to distinguish a speculation from one made in good faith with a purpose to make excavations and ascertain the character of the lode or vein, so as to determine whether it will justify the expenditures required to extract the metal; but a jury from the vicinity of the claim will seldom err in their conclusions on the subject."[72]

MARKING.

After the prospector has made a discovery upon the apex of the lode, posted his notice, and has determined the course or strike thereof, he is ready for the next step, which is the marking of the boundaries thereof. Inasmuch as the various State laws differ in this particular, it will be sufficient in this connection to call attention to the Colorado statute, which requires six substantial stakes, one at each of the four corners and one in the center of each side line, if the form of the location is a parallelogram.

The stakes or monuments set should be carefully maintained, because, if destroyed, an error in the description recorded may become of serious consequence. A location must be marked to be valid.[73] In the absence of a statute a locator has a reasonable time within which to stake his claim after discovery and posting

72 Erhardt v. Boaro, 113 U. S., 527.

73 Newbill v. Thurston, 65 Cal., 419; Pharis v. Muldoon, 75 Cal., 284; Neuebaumer v. Woodman, 89 Cal., 310; Becker v. Pugh, 9 Colo., 589. (Second trial, 17 Colo., 243). Gleeson v. Martin White M. Co., 13 Nev., 442; George S Dodge, 6 C. L. O., 122.

of notice. (Twenty days held to be a reasonable time.)[74] In the absence of local statutes or regulations, if the center of the claim is marked by stakes or monuments at each end, with a written notice on one or both describing the claim as extending from stake to stake, with a certain number of feet surface on each side of said line, the law as to marking of the claim is complied with.[75] A mining claim marked by a discovery monument on which is placed the notice of location, and by a stake at each of the three corners of the claim, and a monument at the center of each end line, leaving one corner of the claim unmarked, is sufficiently marked under section 2324, United States Revised Statutes, providing that the claim shall be "distinctly marked so that its boundaries can be readily traced."[76] The United States law does not define or prescribe the particular kind of marks which shall be made upon a mining location nor upon what part of the claim they shall be placed. Any marking upon the ground claimed, by stakes and mounds and written notices, whereby the boundaries of the claim may be readily traced, is sufficient.[77]

Where the boundaries of a claim are not kept marked the owner will not be allowed to say that his boundaries were not correctly described in his record of location as against one whose location did not conflict with the prior location as described on the record.[78]

A locator must use reasonable diligence in maintaining his location stakes, but is not required, absolutely, to keep them standing constantly.[79]

RECORD.

After the discovery has been made, and the claim properly marked upon the ground, the State statutes or local mining regulations usually require that within

74 Doe v. Waterloo M. Co., 55 Fed. Rep., 11.

75 North Noonday M. Co. v. Orient M. Co., 1 Fed. Rep., 522.

76 Warnock v. DeWitt, 11 Utah, 324.

77 North Noonday M. Co. v. Orient M. Co., 1 Fed. Rep., 522; Jupiter M. Co. v. Bodie Cons. M. Co., 11 Fed. Rep., 666.

78 Pollard v. Shively, 5 Colo., 309.

79 McEvoy v. Hyman, 25 Fed. Rep., 596.

a specified time a record be made thereof either in the office of the county recorder or of the mining district recorder. The time allowed may be determined by consulting the local laws. While the Federal statute does not in express terms make this matter of record obligatory, yet it may be said that section 2324, United States Revised Statutes, impliedly provides therefor by giving authority to make this requirement. Inasmuch as every applicant for patent is required by the regulations of the Land Department to furnish a certified copy of the location certificate on which the application is based, and also to furnish an abstract tracing his title from such location, it would seem to be contemplated by the Department that such record be made. It may be remarked, however, that the courts hold that there is no requirement of United States law as to recording notice of a location.[80]

The process of recording may be in the following manner:

Having marked the boundaries of the claim by the monuments noted, the locator should draw up a description giving the name of the lode (any name he chooses to adopt), the date of location, the courses and distances from corner to corner, beginning with corner No. 1, until the exterior boundaries close, with a statement of the width claimed on each side of the vein. The written description should contain a reference to some natural object or permanent monument by reference to which the locus of the claim may be fixed.

The courses and distances should be determined with extreme care, and the certificate should agree, as nearly as is practicable, with the monuments on the ground. The natural object or permanent monument should be,

80 Haws v. Victoria Copper M. Co., 160 U. S., 303; Thompson v. Spray, 72 Cal., 528; Golden Fleece G. & S. M. Co. v. Cable Cons. G. & S. M. Co., 12 Nev., 312; 15 Nev., 450; Southern Cross G. & S. M. Co. v. Europa M. Co., 15 Nev., 383; Poujade v. Ryan, 21 Nev., 449; Jupiter M. Co. v. Bodie Cons. M. Co., 11 Fed. Rep., 666; Carter v. Bacigalupi, 23 Pac. Rep., 361; Allen v. Dunlap, 24 Oreg., 229; King v. Edwards, 1 Mont., 235; Sullivan v. Hense, 2 Colo., 424; Harvey v. Ryan, 42 Cal., 626; Souter v. Maguire, 78 Cal., 543; Anthony v. Jillson, 83 Cal., 296; Moxon v. Wilkinson, 2 Mont., 421; Upton v. Larkin, 5 Mont., 600. (See S. C., 7 Mont., 449). Gamer v. Glenn, 8 Mont., 371; Freezer v. Sweeney, 8 Mont., 508; Quimby v. Boyd, 8 Colo., 194; North Noonday M. Co. v. Orient M. Co., 1 Fed. Rep., 522; Fuller v. Harris, 29 Fed. Rep., 814. Contra: Sweet v. Webber, 7 Colo., 443.

as indicated, of a conspicuous and permanent character, and, if possible, should be some regularly established mineral monument or a corner of the public survey within a distance of two miles. Lastly, the certificate should contain the date of discovery, the locus by section, township and range and county when possible, and be signed by the locator or locators.

If the location certificate contains some description of the claim by reference to natural objects or permanent monuments, the sufficiency of the description should be left to the jury.[81] An error in a location notice in a particular not essential under the law, regulations or customs of miners is harmless and does not vitiate a description otherwise good.[82] Natural objects or permanent monuments, under section 2324, United States Revised Statutes, may consist of stone monuments, blazed trees, confluence of streams, intersection of prominent buttes, of hills, or of mining shafts.[83]

In the case of Mt. Diablo M. Co. v. Callison, it was said by the court. "The object of any notice at all being to guide a subsequent locator and afford him information as to the extent of the claim of the prior locator, whatever does this fairly and reasonably should be held a good notice. Great injustice would follow if, years after a miner had located a claim and taken possession and worked upon it in good faith, his notice of location were to be subjected to any very nice criticism."[84]

This paper should be executed in duplicate, one copy to be posted in a conspicuous place, preferably at the discovery, the other to be made a matter of record. Even though a State or Territorial statute does not

81 Taylor v. Middleton, 67 Cal., 656; McGregor v. Donelly, 67 Cal., 149; Russell v. Chumasero, 4 Mont., 309; Garfield M. & M. Co. v. Hammer, 6 Mont., 53, 130 U. S., 291; Upton v. Larkin, 7 Mont., 449; S. C., 5 Mont., 600; Flavin v. Mattingly, 8 Mont., 242; Gamer v. Glenn, 8 Mont., 371; Seidler v. Lafave, 4 New Mex., 369; Seidler v. Maxfield, 4 New Mex., 374. The last two cases discuss this point, and overrule Baxter Mtn. G. M. Co. v. Patterson, 3 New Mex., 179.

82 Garfield M. & M. Co. v. Hammer, 6 Mont., 53. (See 130 U. S., 291). Upton v. Larkin, 7 Mont., 449; S. C., 5 Mont., 600; Flavin v. Mattingly, 8 Mont., 242; Gamer v. Glenn, 8 Mont., 371; Metcalf v. Prescott, 10 Mont., 283.

83 Drummond v. Long, 9 Colo., 538.

84 5 Sawy., 439.

require it, a copy should be made of record in the office of the county recorder as a measure of precaution.

The miner has every reason to be exact in all the steps taken to perfect his location. Should his claim develop into a valuable property, he may find a swarm of locators all around him. Locations will be made overlapping his claim in all directions, and the discovery of the least flaw in his title will be the signal for the onslaught of a host of adverse claimants.

Although a location may not be perfected by record within the time specified by local statute or regulation, yet if completed at any time before the intervention of a valid adverse right, it would be held good.

Where A. makes a location upon the ground, but fails to record his notice of location within the time prescribed by the Colorado statutes, and after the expiration of such time, and before the record of such location notice by A., B. makes a regular location and records a notice thereof as required by law, B. has the superior right.[85] A failure to file a location certificate for record within the time prescribed by State statute does not render a location void, if the notice is recorded before the intervention of an adverse claim.[86]

If one can take a copy of a location record and therefrom locate the claim upon the ground, finding all the corners and monuments described therein, both the marking on the ground and the certificate thereof would appear to be sufficient. "All that was intended is that a person seeking to make a subsequent location could go upon the ground referred to, and from the marks made find the boundaries of the claim."[87]

PLACER LOCATIONS.

Placers, according to section 2329, United States Revised Statutes, include all forms of deposit, except

85 Kendall v. San Juan S. M. Co., 144 U. S., 658. (Affirming 9 Colo., 349).

86 Preston v. Hunter, 67 Fed. Rep., 996; Faxon v. Barnard, 2 McCrary, 44; Kramer v. Settle, 1 Idaho, 485.

87 West Granite Mtn. M. Co. v. Granite Mtn. M. Co., 7 Mont., 356; North Noonday M. Co. v. Orient M. Co., 1 Fed. Rep. 522; Gleeson v. Martin White M. Co., 13 Nev., 442; Taylor v. Middleton, 67 Cal., 656; Anderson v. Black, 70 Cal., 226; Doe v. Tyley, 14 Pac. Rep., 376.

veins of quartz or other rock in place. "By the term 'placer claim,' * * * is meant ground within defined boundaries which contains mineral in its earth, sand or gravel; ground that includes valuable deposits not in place, that is, not fixed in rock but which are in a loose state, and may in most cases be collected by washing or amalgamation without milling."[88] Placer mines are those in which minerals are found in the softer material which covers the earth's surface, and not among the rocks beneath.[89] Placers "are superficial deposits which occupy the beds of ancient rivers or valleys," or deposits of valuable mineral, found in particles in alluvium or diluvium, or in the beds of streams.[90] A "mineral lode," as the term is used by miners and the mining acts of Congress, is a zone or belt of mineralized rock lying within boundaries clearly separating it from the neighboring rock, but does not include a deposit of gold-bearing gravel, although the same may lie between clearly defined strata of rock, and have an average drop of several degrees. Such a deposit of gravel is a placer, as that term is used by miners and in section 2329, United States Revised Statutes.[91]

The following deposits are enterable under the placer mining laws: Agate, albertite, alkaline earths, alum, amygdaloid bands, asphaltum, auriferous cement, auriferous clay, black lead, borax, carbonate of soda, china clay, fire clay, diamonds, fahlbands, gilsonite, graphite, gypsum, iron, isinglass, kaolin, limestone, stone, marble, mica, nitrate of potash, nitrate of soda, opal, oil, petroleum, plumbago, phosphates, potash, slate, soda, stockwerke, building stone, sand stone, sulphur and umber.[92]

The Department of the Interior in the recent cases of the Pacific Coast Marble Co. v. N. P. R. R. Co.,[93]

88 United States v. Iron Silver M. Co., 128 U. S., 673. (Affirming S. C., 24 Fed. Rep., 568).

89 Reynolds v. Iron Silver M. Co., 116 U. S., 687.

90 Com'r to C. D. Richardson, Sept. 7, 1892. (Citing Moxon v. Wilkinson, 2 Mont., 421).

91 Gregory v. Pershbaker, 73 Cal., 109.

92 So decided in cases pending before the Land Department, in circular instructions, or in official answers to inquiries made by individuals.

93 25 L. D., 233.

Aldritt v. N. P. R. R. Co.;[94] and Union Oil Company[95] has exhaustively discussed section 2329, United States Revised Statutes, and has held that lands containing the non-metalliferous minerals, if the substances are recognized as mineral by the standard authorities and the lands are more valuable therefor than for agricultural purposes, may be taken as placer mining claims under the statute. The first case was with regard to a deposit of marble, the second fire clay, and the last petroleum. This last decision was a reversal of a former holding of the Department that petroleum was not a mineral within the provision of the statutes.[96]

An examination of the list above given, taken in connection with the definitions of veins, p. 23, and placers, p. 33, will enable the prospector to determine whether the deposit discovered has been classified as mineral under the mining laws, and if so whether the land containing it should be located as lode or placer.

In most particulars the method of making a placer location is the same as that pursued in case of lode claims. It is required, however, that when on surveyed lands, placers shall conform as near as reasonably practicable to the United States system of public land surveys. When the ground it is desired to locate can be taken in this manner, the location notice need merely describe the tract by legal subdivisions as in agricultural cases, and no markings of the corners would appear to be necessary under the decisions of the Land Department, it being held that such a location is sufficiently definite under the statute to give lawful notice of the extent of the claim.

It has been held by some courts, however, that a placer claim taken by legal subdivisions must be staked upon the ground.[1]

Placer claims on surveyed land must be located by legal subdivisions or reason shown for failure to do so.[2] The location of a claim by legal subdivisions is valid even though erroneously described, providing the

94 25 L. D., 349.

95 25 L. D., 351.

96 See also Act of Feb. 11, 1897, 29 Stat. 526, p. 133.

1 White v. Lee, 78 Cal., 593; Gregory v. Pershbaker, 73 Cal., 109; Anthony v. Jillson, 83 Cal., 296.

2 S. P. R. R. Co. v. Griffin, 20 L. D., 485.

abutting legal subdivisions are correctly given.[3] A location of a placer claim by legal subdivisions must be made to conform therewith in the matter of exact description of the land as shown by the township plat. Fractional subdivisions designated by the United States Surveyor General as lots must be so described.[4] Though placer claims on surveyed lands are required to conform "as near as practicable" with legal subdivisions, they may be located along a stream or canyon, as it is not the intent of the law to compel the placer claimant to take land unfit for mining.[5] A placer entry of a long, narrow strip of land covering a stream of water, on surveyed land, was held to conform as near as reasonably practicable with the public surveys, where it was shown that the surrounding land was valueless for mining. (In this case four entries covered a strip of land from five to five hundred feet wide and about eighteen miles long.)[6]

The staking of every twenty acres of placer claim is not required, the claim being an entirety.[7]

For purposes of convenience in making locations in this manner, section 2330, United States Revised Statutes, provides that legal subdivisions of forty acres may be subdivided into ten-acre tracts, and a location notice describing the claim as embracing the E. ½ of E. ½ of S. E. ¼ of S. E. ¼ of the appropriate section, township and range would be regular as to this particular.

Anyone familiar with the system of public land surveys knows that, owing to the convergence of the meridian lines, the townships, while in theory six miles square, are in fact not perfect squares of these dimensions. The north and west tiers of sections, where the survey is progressing to the north, as is the case with most of the public lands where mineral is found, contain the irregular areas. An examination of any township plat will show along the outer edge of all these north and west sections, a line of tracts contain-

3 Duryea v. Boucher, 67 Cal., 141; 7 Pac. Rep., 421.

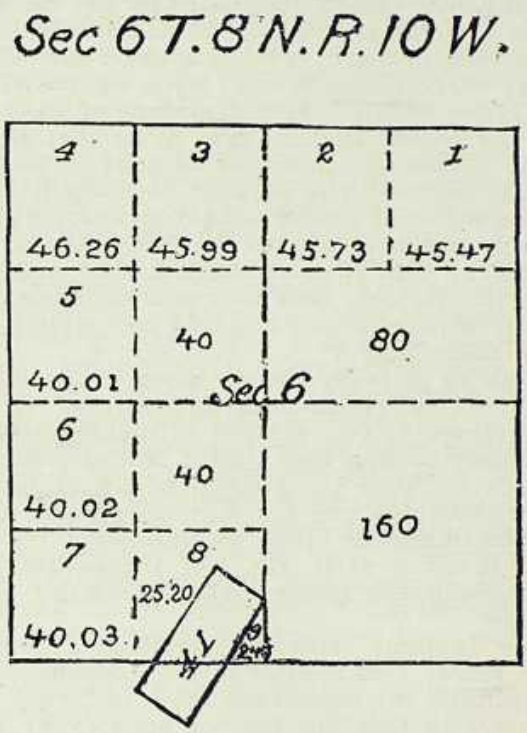
4 Reins v. Murray, 22 L. D., 409.

5 William Rablin, 2 L. D., 764.

6 Pearsall & Freeman, 6 L. D., 227.

7 Com'r to Aaron F. Baker, April 12, 1893; McDonald v. Montana Wood Co., 35 Pac. Rep., 668.

ing more or less than forty acres. These are described as lots, each one being given a number, beginning with No. 1 at the right of each section and continuing in successive numbers to the left.



The extreme northwest subdivision should be located as lot 4, containing 46.26 acres. If the location covers but a part of lot 4, the tract taken should be described by metes and bounds, the lot not being divisible as provided by section 2330, United States Revised Statutes. In this case an application for patent would have to be based upon a survey by metes and bounds as in applications for lode claims.[8]

Legal subdivisions of forty acres are often rendered fractional by the segregation of lode claims as indicated by the above diagram. In such cases the United

8 G. A. Khern, 6 L. D., 580.

States Surveyor General designates the portions remaining of the legal subdivisions by appropriate lot numbers with their areas, the records of the Land Department are noted accordingly, and the same rule applies here as illustrated by lot 4.

When the location cannot conveniently be made to conform in description to the public subdivisional survey, because of the distribution of the minerals, as when they are found along the course of a tortuous stream, the location should be made by metes and bounds. Care should be exercised as to this particular by the locator, as a claim may be rejected by the Land Department if located by metes and bounds and no good reason appears for failure to make the claim conform to legal subdivisions.[9]

No location of a placer may, since the passage of the act of May 10, 1872, embrace more than twenty acres for one individual, and an association may locate not to exceed twenty acres for each individual therein,[10] the maximum area which may be included in one location being one hundred and sixty acres. A corporation, being in law an individual, can properly include but twenty acres in one location.[11]

A placer location on unsurveyed lands must, as to description, be practically the same as a lode or vein location, with the modifications rendered necessary by the differences in the character of the claims, and the requirements as to marking, posting, record and annual labor are also the same.[12]

MILL SITE LOCATIONS.

Section 2337, United States Revised Statutes, provides for the patenting of lands as mill sites. Nothing is prescribed by the statute as to the manner of locating such claims, but the practice has been to make a location similar in form to that of placers.[13]

The land embraced in a claim under this section must

9 S. P. R. R. Co. v. Griffin, 20 L. D., 485.

10 Reynolds v. Iron Silver M. Co., 116 U. S., 687; St. Louis Sm. Co. v. Kemp, 104 U. S., 636.

11 Gird v. California Oil Co., 60 Fed. Rep., 531.

12 See ante, p. 20.

13 Rico Townsite, 1 L. D., 556; Hargrove v. Robertson, 15 L. D., 499.

not exceed five acres in area; must be non-mineral in character; be non-contiguous to a lode, and be used or occupied for mining or milling purposes in connection with a lode, or have a mill or reduction works thereon. Title depends upon the character of the land and upon use and occupancy for the purpose indicated.[14]

ANNUAL LABOR.

After perfecting the location of his claim as indicated in the preceding paragraphs, the locator has good title against the world conditional upon a compliance with the provisions of section 2324, United States Revised Statutes, relative to the performance of annual labor.[15]

A legal location maintained by the performance of the required labor, commonly termed "assessment work," confers a vested right of which the claimant cannot be deprived even by the general government except by the exercise of the right of eminent domain. It has been held that land embraced within a valid, legally maintained mining location will be excepted from a reservation established by executive proclamation.[16]

Annual labor was not required by statute prior to the act of Congress of May 10, 1872, and the matter was regulated solely by the mining district regulations. Section 2324, United States Revised Statutes, is a recognition of such local district regulations, and is admirably adapted to promote the development of our mineral resources, as well as to prevent any monopoly of mining ground, the requirement serving to prevent the location of land as mining claims unless the locator has sufficient faith in the mineral character thereof to cause him to make an expenditure in its exploitation.[17]

14 Charles Lennig, 5 L. D., 190; Cyprus Mill Site, 6 L. D., 706; Iron King Mine and Mill Site, 9 L. D., 201; Mint Lode and Mill Site, 12 L. D., 624; Gold Springs & Denver City Mill Site, 13 L. D., 175.

15 See p. 24. Erhardt v. Boaro, 113 U. S., 527; 2 McCrary, 141; O'Reilly v. Campbell, 116 U. S., 418. (Citing Jennison v. Kirk, 98 U. S., 453; Jackson v. Roby, 109 U. S., 440).

16 See ante, p. 8. John U. Gabathuler, 15 L. D., 418; Fort Maginnis Case, 1 L. D., 552 (Op. Atty. Gen.)

17 Cons. Republican Mtn. M. Co. v. Lebanon M. Co., 9 Colo., 343.

The statute provides for a certain expenditure on claims located prior to May 10, 1872, and on claims located subsequent to that date. Inasmuch as the great majority of the claims located prior to that date have been passed to patent or have been relocated under said act, it is deemed unnecessary to here consider such claims.

Under the law as it is now construed, locations are treated as entireties, and the expenditure of $100 may be made upon any part thereof. When a number of contiguous locations are held in common, an expenditure of an amount equal to $100 for each[18] may be made upon one or more of such locations, provided such expenditure tends to the development of the claim as a whole. That such expenditure is of benefit to each location must clearly appear, otherwise the locations on which no work is done may be successfully attacked on the charge of abandonment. Work done outside of the claim, if done for the development thereof, has been accepted as sufficient. This rule is well settled and is concisely stated by the court in the case of Mt. Diablo M. & M. Co. v. Callison:

"Work done outside of the claim, or outside of any claim, if done for the purpose and as a means of prospecting or developing the claim, as in case of tunnels, drifts, etc., is as available for holding the claim as if done within the boundaries of the claim itself. One general system may be formed well adapted and intended to work several contiguous claims or lodes, and, when such is the case, work in furtherance of the system is work on the claims intended to be developed by it."[19]

The opinion in the case of Jupiter M. Co. v. Bodie Cons. M. Co., contains this statement:

"Where one person or company owns several contiguous adjoining claims capable of being advantageously worked together, one general system may be adopted to work such claims. Such system may consist of a shaft with drifts, cross-cuts and tunnels therefrom, and such works need not be upon any of the claims in question. When such system is adopted,

18 Chambers v. Harrington, 111 U. S., 350. (Citing Jackson v. Roby, 109 U. S., 440).

19 5 Sawy., 439. (Quoted and followed in Kirk v. Clark, 17 L. D., 190).

work in the furtherance of the system is work on the claims intended to be developed by it. Work done outside of the claims, or outside of any claim, if done for the purpose, and as a means of prospecting or working the claim, is as available for holding the claim as if done within the boundaries of the claim itself."[20]

Where a trial is had on the issue of abandonment, the one alleging it has made out a prima facie case if he has shown that no work was done during the period in question upon the claim. If the one denying the charge of abandonment depends upon work done outside of the claim, he has the burden of proof.[21]

Inasmuch as the statute requires an annual expenditure to the amount of $100 on each location, and each location is treated as an entirety, and not divisible, it follows that, even though one or more of several locators fail to contribute their respective portions of such amount, the others must perform the whole labor, or the claim will become subject to adverse relocation. The ones complying with these conditions have a remedy, however, prescribed by said section 2324, United States Revised Statutes, which will be more fully considered hereafter.[22]

Any expenditure in labor or improvements which directly facilitates the development of the claim may be counted as a compliance with this condition of the statute; but the work must be such as tends with reasonable directness to the development of the claim. Hence, it has been held that building a miner's cabin outside of the claim cannot be considered as labor done upon or for the benefit of the claim.[23] In another case, where an ore-house erected upon the claim was alleged to be a mining improvement, it was held that the claimant must show it to have been placed there

20 11 Fed. Rep., 666. See also St. Louis Sm. Co. v. Kemp. 104 U. S., 636.

21 Hall v. Kearney, 18 Colo., 505.

22 See Co-owners p. 48.

23 "If such kind of work or improvements off the claim were sufficient for the purpose of representation and patent, then the building of a house in a town or city, no matter how far away from the mine, if the miner had his meals and lodged there, might entitle him to hold his claim," etc. Remington v. Bandit, 6 Mont., 138.

for the development of the claim.[24] In still another case it was decided that wages paid a watchman who had charge of idle works upon a mining claim might be properly considered as constituting the required annual expenditure for the benefit of the claim.[25] The annual expenditure required upon mining claims may be made in running a tunnel not upon the claim.[26] Such labor or expenditure in the erection of works or buildings for mining, placing machinery, or making excavations on the claim, necessary for its working, may be considered as assessment work on mining claims.[27] Constructing a wagon road to the claim and partly thereon, for the development and working thereof, if the expenditure has been to the required amount, may be treated as a compliance with the statute as to annual labor.[28] Leasing a mill not upon the claim and not used in connection with the claim, and expenditure of money for personal expenses in the attempt to secure water with which to operate the mill, cannot be considered as work done or expenditure made upon the claim.[29]

Assaying and sampling ores does not constitute expenditure for the development of a claim.[30] Efforts to secure machinery necessary to work a mine are, by relation and intendment, work done upon the claim.[31] Expenses in traveling to and in locating and recording a claim cannot be considered annual expenditure.[32] Expenditure, to be considered as for the benefit of a claim, must have some direct relation to its development. The traveling expenses of the owner do not have such relation.[33] A trail and a wagon road a mile long running from a lode claim to a smelter, made for the transportation of ore from the lode claim to the

24 Bryan v. McCaig, 10 Colo., 309.

25 Lockhart v. Rollins, 2 Idaho, 503.

26 Circular as to Tunnel Rights, 5 C. L. O., 34. Com'r to E. D. Coleman, 1 C. L. O., 34.

27 Lockhart v. Rollins, 2 Idaho, 503.

28 Doherty v. Morris, 11 Colo., 12; 17 Colo., 105;

29 Du Prat v. James, 65 Cal., 555.

30 Bishop v. Baisley, 41 Pac. Rep., 936.

31 Packer v. Heaton, 9 Cal., 568 (1858).

32 J. M. Crawford, 9 C. L. O., 130.

33 Du Prat v. James, 65 Cal., 555.

smelter, may be considered as an expenditure upon the lode claim.[34] A road, no part of which is upon the claim applied for, and not made for the sole benefit thereof, cannot be considered as an improvement on the claim.[35] Work done on a road made for the development of a group of mining claims may not be apportioned as done for the benefit of claims on which no portion of the road is located.[36] Working on adjoining land in constructing a drain to enable the owners to work the claim is to be considered as work done on the claim.[37] Work done on a ditch outside of a placer claim, and prior to the location of the claim, cannot be considered as having been done for the benefit of the claim in the absence of a clear showing of such fact.[38] The extension of a flume over premises sought to be held as a mining claim, and their use as a place of deposit for the waste material from an adjoining claim owned by the same person; is not such an expenditure upon them as will sustain the claim under the law.[39] The turning of a stream, the introduction of water, the construction of a flume to carry off debris or waste material, are labor and improvements within the meaning of the statute.[40]

It has sometimes been attempted to fix by mining district regulations the value of labor; for example, that each foot of a shaft shall be counted as worth ten, fifteen or twenty dollars. Values cannot be arbitrarily fixed by local statute or regulation, however, but are determined by the market price, in the community, of labor or material. The tribunal having this question before it would ask: What was the fair value in the district at the time the expenditure was made? "In estimating the amount of work or improvements, the test is the reasonable value thereof,"[41] and the amount paid for performance of annual labor is not conclusive of its value, but is properly admissible in evidence.[42]

34 Emily Lode, 6 L. D., 220.
35 Alice Edith Lode, 6 L. D., 711.
36 White Cloud Copper M. Co., 22 L. D., 252.
37 Packer v. Heaton, 9 Cal., 568 (1858).
38 Trickey Placer, 7 L. D., 52.
39 Jackson v. Roby, 109 U. S., 440.
40 St. Louis Sm. Co. v. Kemp, 104 U. S., 636.
41 Mattingly v. Lewisohn, 8 Mont., 259.
42 Quimby v. Boyd, 8 Colo., 194.

The Federal statute of January 22, 1880, amended section 2324, United States Revised Statutes, by providing that the first annual expenditure upon all unpatented mineral claims shall be made during the year commencing January first after the location is made.[43] To illustrate: If A. made a location October 1, 1896, his first annual expenditure in labor, or in improvements, must be made between January 1 and December 31 of the year 1897. He will have the whole of the year 1897 in which to do the work and need do none during the remaining portion of 1896. It is not necessary to do the work in any particular part of the year 1897, it being necessary solely that at 12 o'clock, midnight, December 31, 1897, he stands ready and able to prove that work for 1897 has been done.[44]

Failure to do the prescribed work does not necessarily result in a forfeiture. The claimant may resume work during the succeeding year, and if he does so before the intervention of a valid adverse relocation, his rights are saved; and the courts have gone to the extent of holding that if, before an adverse relocation, he does sufficient work to show his good faith, he may have the whole year in which to complete labor to the required amount of one hundred dollars. It is dangerous, however, to take any chances, and the locator is wise if he does an amount of development work in good season, as to the sufficiency of which there can be no question.

It was held in King v. Edwards, in substance, that the laws and customs which point out the manner of locating mining claims are conditions precedent to the right to possess and mine a claim, and no such right can be acquired until such conditions precedent are complied with. The requirements as to performance of annual labor, however, are conditions subsequent, the mere breach of which is not, per se, sufficient to cause a forfeiture, which must result from entry by the grantor (the United States) or one claiming under it, i. e., a relocation of the claim under the mineral laws.[45]

43 See p. 125.

44 Belk v. Meagher, 104 U. S., 279; Atkins v. Hendree, 1 Idaho, 95; Hall v. Hale, 8 Colo., 351.

45 1 Mont., 235.

If work is resumed on a claim after it has once been opened to relocation, but before a relocation has actually been made, the rights of the original owners stand as they would if there had been no failure to comply with the law.[46]

When a locator avails himself of the statutory privilege of resuming work to preserve his estate from forfeiture, he should prosecute the same with reasonable diligence until the requirement of $100 expenditure has been satisfied,[47] but such resumption of work cannot be held to have been prosecuted with due diligence where it appears that fifteen days prior to relocation all work thereon has ceased.[48] The effect of a resumption of work on a mining claim before relocation thereof by adverse claimants is exhaustively discussed in the cases cited below.[49]

The fact that work done has not been paid for by the claimant does not affect its sufficiency under the law, the Government not inquiring into the relations between employer and employee,[50] and failure to do work because of the threats of violence of adverse claimants in possession, has been held by the courts to be sufficient to excuse failure in such particular, at least as against a relocation by those making the threats or guilty of the violence by reason of which the claimant was deterred from performing the required labor.[51]

As the patent, when issued, relates back to the date

46 Belk v. Meagher, 104 U. S., 279.

47 Honaker v. Martin, 11 Mont., 91. (Followed in Hirschler v. McKendricks, 16 Mont., 211.

48 Hirschler v. McKendricks, 16 Mont., 211; 40 Pac. Rep., 290.

49 North Noonday M. Co. v. Orient M. Co., 6 Sawy., 299; 1 Fed. Rep., 522; Jupiter M. Co. v. Bodie Cons. M. Co., 11 Fed Rep., 666; Belcher Cons. G. M. Co. v. Defferrari, 62 Cal., 160; Du Prat v. James, 65 Cal., 555; Pharis v. Muldoon, 75 Cal., 284; Lacey v. Woodward, 25 Pac. Rep., 785; McGinnis v. Egbert, 8 Colo., 41; Gonu v. Russell, 3 Mont., 358; Belk v. Meagher, 3 Mont., 65; 104 U. S., 279.

50 Lockhart v. Rollins, 2 Idaho, 503; Coleman v. Curtis, 12 Mont., 301.

51 Utah M. & Mfg. Co. v. Dickert & Meyers Sulphur Co., 6 Utah, 183; Oreamuno v. Uncle Sam G. & S. M. Co., 1 Nev., 215; Robinson v. Imperial S. M. Co., 5 Nev., 44; Slavonian M. Co. v. Vacavich, 7 Fed. Rep., 331; Mills v. Fletcher, 100 Cal., 143; Craig v. Thompson, 10 Colo., 517; Erhardt v. Boaro, 8 Fed. Rep., 692; 113 U. S., 527.

of entry, it has been held that the annual labor need not be done subsequent to the date of such entry and payment for the land.[52]

Past large expenditure, although thousands of dollars in excess of the year's requirements, cannot be counted as labor for succeeding years.[53]

A failure to perform annual labor or to "represent" the claim up to the date of entry, will not be excused by court proceedings on an adverse claim.[54] State laws or local regulations cannot relieve mine owners from the necessity of a compliance with the United States statutes relative to annual expenditure,[55] nor can a regulation of a mining district require more work to be done than is specified by the act of May 10, 1872. (Sec. 2324 U. S. Rev. Stat.)[56]

FORFEITURE.

Failure to perform the annual labor prescribed by Section 2324,[57] United States Revised Statutes, does not, as has already been stated, necessarily operate as a forfeiture of the claim. The land, however, becomes subject to relocation by others if work is not resumed, and, if such relocation is made, forfeiture then results, it being held that in order to have a forfeiture take place there must be some person, natural or artificial, who is entitled to the benefit of the forfeiture when it occurs, i. e., a new claimant.[58]

The burden of proving a forfeiture is upon the one asserting it, proof of a legal location of a mining claim

52 Benson M. & Sm. Co. v. Alta M. & Sm. Co., 145 U. S., 428. (Affirming Alta M. & Sm. Co. v. Benson M. & Sm. Co., 16 Pac. Rep., 565; and citing and approving American Hill Quartz Mine, Sickel's Min., Dec. 377-385; Copp's Min. Lands, 254; Aurora Hill Cons. M. Co. v. 85 M. Co., 34 Fed. Rep., 515; Deno v. Griffin, 20 Nev., 249. To same effect see, also, F. P. Harrison, 2 L. D., 767; Alice Placer, 4 L. D., 314; Sweeney v. Wilson, 10 L. D., 157; Ferguson v. Belvoir M. & M. Co., 14 L. D, 43).

53 Ferguson v. Belvoir M. & M. Co., 14 L. D., 43; W. S. Merrell, 5 C. L. O., 5.

54 Clark v. American Flag G. M. Co., 7 C. L. O., 5.

55 Sweet v. Webber, 7 Colo., 443.

56 Original M. Co. v. Winthrop M. Co., 60 Cal., 631.

57 See page 124, paragraph 16, Regulations p. 127.

58 See ante, p. 44.

and of possession thereof raising a presumption that all the conditions prescribed by the statutes have been fulfilled.[59]

Where there is a resumption of work it must be of a substantial character, and be bona fide and not merely formal, and in any controversy arising upon the point, the court will necessarily have to decide whether the work performed was done solely with a view of preventing relocation, or with an honest intention to comply with the letter and spirit of the mining laws. This intent will be determined by the acts of the claimant.[60]

When work has not been done for any one year, the land covered by the location becomes, for all practical purposes, again public domain, and the prospector thereon is not a trespasser, but has the right to explore and occupy, the same as he has on other vacant public lands.[61]

A relocation of abandoned ground must be made with all the formalities attending the location of ground which had never before been claimed as mineral. The relocator may, however, adopt as his own the discovery and markings of the original location, although under some of the local laws and regulations he is required to sink the discovery shaft deeper, thereby practically making a new discovery.[62]

An owner of an abandoned claim may make a relocation of the claim the same as a stranger,[63] but the better method of reviving his title would seem to be a resumption of work as heretofore noted.

In all essential respects it is a new location, and it would appear to be unnecessary to make any mention in the location notice of the original claim, as the relocator gains no rights or title therefrom and is not permitted to avail himself of any of the expenditures made by the former claimant. Should his title ever be

59 Hammer v. Garfield M. & M. Co., 130 U. S., 291; S. C., 6 Mont., 53; 8 Pac. Rep., 153.

60 McCormick v. Baldwin, 104 Cal., 227; 37 Pac. Rep., 903. (Overruling Belcher Cons. G. M. Co. v. Defferrari, 62 Cal., 160).

61 Derry v. Ross, 5 Colo., 295; Richardson v. McNulty, 24 Cal., 339.

62 Warnock v. DeWitt, 11 Utah, 324; 40 Pac. Rep., 205; Hunt v. Patchin, 35 Fed. Rep., 816; Com'r to Max Boehmer, March 15, 1881; Copp's Min. Lands, 2d ed., 300.

63 Strang v. Ryan, 46 Cal., 33.

questioned by the prior locators, he could plead location thereof as abandoned ground, and his case would be just as strong as though he had set up in his own location notice a full statement of the prior claim, the abandonment thereof, and his relocation. As a matter of fact, if he specifically sets up such prior claim in his location notice, he might be held to thereby admit the regularity thereof, and his only defense would be forfeiture of such original location because of failure to perform the annual labor thereon.[64]

Abandonment under the mining laws does not result until the expiration of the calendar year in which the annual labor should have been performed, and a relocation made before the expiration of that time is void, even though prior to such relocation the original claimants had left the claim with no intention of returning.

To illustrate: A., the owner of a mining claim, leaves the ground, say in June, without having done any work during the year. B. makes a relocation in December. A. does not resume work and C. enters and makes a formal location, in all respects regular, January 1st. C.'s location is good as against that of B., B.'s location being void ab initio, having been made when the ground was not subject to relocation.[65]

Until the enactment of statutes governing the subject, it was held in the earlier mining cases, notably in California and Nevada, that the common-law doctrine relating to the abandonment of property was applicable to mining claims, upon which idea was based the theory that in mining law there existed a distinction between the abandonment of a mining claim and a forfeiture thereof. The distinction made was that abandonment was the act of the party in renouncing, in effect at least, all claim or right to the property, while forfeiture was only completed by relocation of a claim upon which the prescribed expenditure had not been made.[66]

64 Wills v. Blain, 4 New Mex., 378.

65 Belk v. Meagher, 104 U. S., 279.

66 Mallett v. Uncle Sam G. & S. M. Co., 1 Nev., 188; Packer v. Heaton, 9 Cal., 568; 4 Mor. Min. Rep., 447; St. John v. Kidd, 26 Cal., 263; Waring v. Crow, 11 Cal., 366; Bell v. Bedrock T. & M. Co., 36 Cal., 214; Morenhaut v. Wilson, 52 Cal., 263;

Under the existing law, however, it would be difficult, if not impossible, to draw any distinction between the two terms. The law only concerns itself with the question as to whether the claim has been forfeited, and this is a question to be decided by the court.[67]

CO-OWNERS.

A co-claimant may relocate a claim in his own name after the same has been abandoned because of failure to perform the annual labor,[68] although the preferable course for him, if he deems his title worth maintaining, is to make the required expenditure, and, if his co-owners fail to contribute their proper proportion of the amount, to proceed in the specific manner prescribed in Section 2324,[69] United States Revised Statutes, for such cases. This procedure is to make a formal demand for the amount due, either by personal notice in writing, or by publication of such demand for ninety days in the newspaper published nearest the land.[70]

If personal notice in writing is given, and no payment made, the forfeiture becomes final in ninety days thereafter; if such notice is given by publication, the forfeiture results ninety days after the date of last publication.

The Federal statute prescribes no method of making proof of forfeiture, but, in making proof upon application for patent before the Land Department, certain proof is required. See p. 129.

Some of the States require, in case of personal notice, that an affidavit by the claimant setting forth the fact of such notice and that no payment had been tendered thereunder, shall be recorded; and that in case of notice by publication, a copy of the notice as published,

Stone v. Geyser Quicksilver M. Co., 52 Cal., 315; Myers v. Spooner, 55 Cal., 257; Taylor v. Middleton, 67 Cal., 656; Derry v. Ross, 5 Colo., 295; Omar v. Soper, 11 Colo., 380; Weill v. Lucerne M. Co., 11 Nev., 200; Marshall v. Harney Peak Tin M. & M. Co., 1 S. Dak., 350.

67 Fairbanks v. Woodhouse, 6 Cal., 433 (1856).

68 Strang v. Ryan, 46 Cal., 33.

69 See p. 124.

70 See paragraph 18, Regulations p. 129.

having attached thereto the publisher's affidavit, and an affidavit by the claimant as to non-payment, be recorded.

The courts view with strong disapproval, however, any acts upon the part of one co-owner savoring of fraud or collusion by means of which a claim is subject to relocation by third persons to the injury of the other owners, and if the claim is not represented by reason of bad faith on the part of one of several co-owners who has been intrusted with the duty, and by reason of that fact is relocated by a third person, acting in collusion with such co-owner, the relocator would, without doubt, be adjudged a trustee under the relocation, for the use and benefit of the original owners.

To give a person the right to procure by forfeiture proceedings under Section 2324 U. S. Rev. Stats., the interest of another in a mining claim held by possessory title, the two persons must not only be co-owners at date of the forfeiture notice, but during the year in which the particular work was done upon the claim.[71] It was long held by the Land Department that the regularity and legality of forfeiture proceedings, against alleged delinquent co-owners, would not be questioned if such co-owners failed to protect their rights by filing an adverse claim under Section 2326, United States Revised Statutes.[72] Under this view the practice was, to ignore the fact that the name of a co-owner had been omitted from the application for patent, but by a recent decision[73] it was held, following the rule laid down in Turner v. Sawyer,[74] that a tenant in common of a mining claim holding under possessory title, is not bound to file an adverse claim against an application for patent filed by a co-owner, and that the statute contemplates the filing of an adverse claim by one setting up a title against the mining claim applied for, not by one alleging an interest in the claim.

Where an applicant bases his right to a patent on a relocation, in the making of which he acted as a constructive trustee for the benefit of co-owners according to their respective interests in the original location, such co-owners are not obliged to adverse the applica-

71 Turner v. Sawyer, 150 U. S., 578.

72 Grampian Lode, 1 L. D., 544.

73 Thomas v. Elling, 25 L. D., 495.

74 150 U. S., 578.

tion, but may have the applicant declared trustee.[75] Where one of two tenants in common of a mining claim promises to perform the work necessary to prevent the claim from becoming subject to relocation, but fraudulently fails so to do and relocates the claim for himself, though he has the legal title, he may be declared constructive trustee under the relocation for his co-owner as to his interest.[76] Where one tenant in common of a mining claim promises to see that the required annual labor is performed, but through collusion with a third person fails to do so, and the claim is relocated by such third person, the relocator may be declared a constructive trustee for the defrauded owner.[77] One who locates a claim in the names of himself and others, even without their consent, makes such others co-owners with himself, and cannot deprive them of their interests by destroying the location notice and posting a new one, omitting their names.[78] The taking of hostile possession of a mining claim by one tenant in common and excluding the co-tenant is an ouster, from the date of which the Statute of Limitations begins to run in favor of the tenant so taking possession and against his co-tenant.[79] A co-owner who has been "advertised out" may show his compliance with the law in the matter of expenditures, and that there was in fact no forfeiture.[80]

It is probable that the practice of the Land Department, in the matter of the examination of title, will be modified in view of the case of Thomas v. Elling,[81] to require, when the abstract of title shows an interest in a co-owner who is not joined in the application for patent, complete proof that such co-owner has been regularly "advertised out." It is not seen, however, what more could be required or furnished than is now prescribed by the regulations.[82]

The partnership which exists between co-owners or

75 Hunt v. Patchin, 35 Fed. Rep., 816.
76 Saunders v. Mackey, 5 Mont., 523.
77 Doherty v. Morris, 11 Colo., 12.
78 Morton v. Solambo Copper M. Co., 26 Cal., 527.
79 420 M. Co. v. Bullion M. Co., 9 Ney., 240.
80 Brundy v. Mayfield, 15 Mont., 201.
81 25 L. D., 495.
82 See paragraph 18, p. 129; D. P. Whedon, 4 C. L. O., 50.

co-lessees who work a mining claim in common is a particular and limited one;[83] they may be partners for the purpose of working the claim and may bind each other as such,[84] but are not necessarily such for the purpose of selling the claim, and one has no concern in what another receives for his share.[85]

APEX-DIP.

The statutes confer upon the mining claimant certain further rights which it is necessary to notice under a discussion of the subject of location. Among these are the right to work the lodes claimed, upon their dip, and the relative rights of claimants to intersecting veins whether upon the strike or upon the dip. Sections 2322 and 2336,[86] United States Revised Statutes, regulate these rights. The subject is much involved, the courts being by no means uniform in their decisions, and it is the purpose here to point out only the ordinary incidents as to which the law seems to be well established.

The matters relating to apex and dip of veins have no application to placer and mill site locations, the title granted thereunder being the right to all of the land embraced within the exterior boundaries thereof, extended perpendicularly downward to the center of the earth.

The conditions prescribed by Section 2320, United States Revised Statutes, are that no location shall exceed six hundred feet in width by fifteen hundred feet in length; that a discovery of the vein or lode shall be made, and that the end lines shall be parallel. The extent of the rights acquired by a location fulfilling

83 Kahn v. Central Sm. Co., 102 U. S., 641; Bissell v. Foss, 114 U. S., 252; Skillman v. Lachman, 23 Cal., 198; Duryea v. Burt, 28 Cal., 569; Charles v. Eshleman, 5 Colo., 107; Manville v. Parks, 7 Colo., 128; Meagher v. Reed, 24 Pac. Rep., 681; Lamar v. Hale, 79 Va., 147; Crawshaw v. Maule, 1 Swanst., 495; Fereday v. Wightwick, 1 Russ. & M., 45; Williams v. Attenborough, 1 Turn. & R., 70; Dickinson v. Valpy, 10 B. & C., 128; Rock on Mines, 574.

84 Charles v. Eshleman, 5 Colo., 107; Manville v. Parks, 7 Colo., 128; Skillman v. Lachman, 23 Cal., 198; Duryea v. Burt, 28 Cal., 569; Dougherty v. Creary, 30 Cal., 300; Settembre v. Putnam, 30 Cal., 493; Higgins v. Armstrong, 10 Pac. Rep., 232.

85 Harris v. Lloyd, 11 Mont., 390.

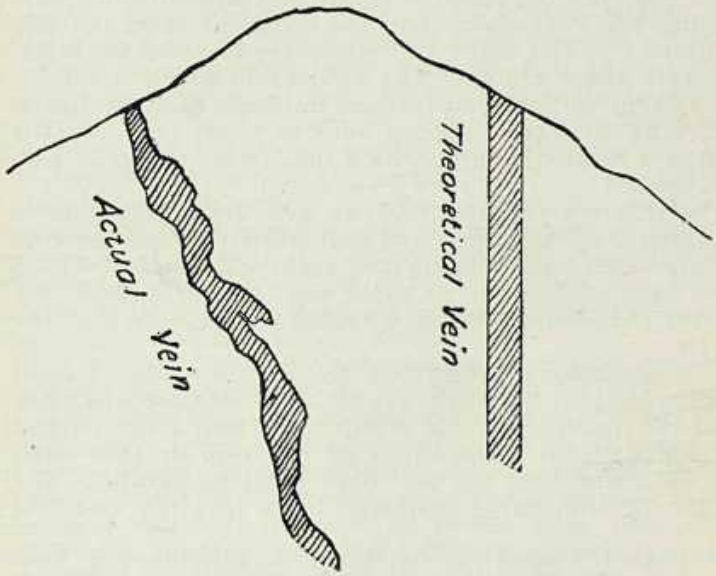
86 See pages 120 and 121.

all these conditions is fixed by Sections 2322 and 2336, United States Revised Statutes.

Section 2322 grants to the owner of a location made in compliance with Section 2320, United States Revised Statutes, these rights:

1. The right of exclusive possession and enjoyment of the surface ground embraced within his location, and,

2. The right to work all lodes or veins the tops or apexes of which lie within such surface ground,



throughout their entire depth, although they may so far depart from the perpendicular in their course downward as to extend outside the vertical side lines of the location.

Theoretically, a vein or lode extends perpendicularly downward indefinitely. Actually, it usually inclines more or less from the perpendicular, which inclination is called its dip, and ordinarily, if pursued to a great

depth, it will be found to pass beyond the side lines of the location, extended vertically downward into adjoining ground.

It is the right to work this last portion of the vein, which Section 2322, United States Revised Statutes, grants. The figure illustrates the theoretical vein and the vein as it is usually found to exist.

The apex of a vein is that portion which approaches nearest the surface of the earth, but the term cannot be applied to the highest part of a roll or swell of a body of mineral matter.[87] It is the end, edge, or terminal point nearest the surface.[88] The apex is not necessarily either a point or a line, and if a part of it is discovered within the claim, that is sufficient upon which to base a location.[89]

A vein need not necessarily crop out on the surface in order that a location may be laid upon it; but where it does crop out or is so slightly covered by foreign matter that its apex may be readily ascertained, the course of the apex should be substantially followed in making the location.[90] While the owner of a mining claim owns all lodes, the apexes of which are within his claim, he acquires no right to a lode the apex of which is outside his claim.[91] "The ownership of or title to a vein is determined by its top or apex; and although one may discover a vein within the limits of the ground claimed, yet if the top or apex of such vein lies without his claim, he will acquire no right thereto."[92] It is to be observed, however, that in the cases referred to the controversy was between one claimant having the apex of the vein and another claimant alleged to have a claim located only on the dip of the vein in controversy.

Some veins or lodes are practically horizontal for long distances and are termed "blanket" or "contact" veins, but the fact that a lode has but a slight

87 Stevens v. Williams, 1 McCrary, 480; Stevens v. Gill, 1 Mor. Min. Rep., 566, 576.

88 Iron Mine v. Loella Mine, 3 Fed. Rep., 368; S. C. Iron Silver M. Co. v. Murphy, 1 Mor. Min. Rep., 548.

89 Larkin v. Upton, 144 U. S., 19.

90 Flagstaff S. M. Co. v. Tarbet, 98 U. S., 463.

91 North Noonday M. Co. v. Orient M. Co., 1 Fed. Rep., 522.

92 Upton v. Larkin, 7 Mont., 449; S. e S. C., 114 U. S., 19.

departure from a horizontal will not except it from the statute giving the locator on the apex the right to follow on its dip outside the side lines of his claim.[93]

The patentee of a mining claim is, prima facie, the owner of all minerals lying inside the surface boundaries until it is shown by a preponderance of evidence that a lode, the apex of which lies outside of such boundaries, has been located by another and that such lode dips under and into his claim.[94] A miner has no right to follow a lode on its dip outside of his claim into the claim of another unless his own location contains the apex of the lode.[95] The burden is on one claiming the right to work a lode on its dip into the claim of another, to show clearly that the lode in question has its apex in his own claim, and to show this he must trace a continuous streak of quartz or body of ore from the apex to the ground in controversy, not merely indications of vein matter, such as might be followed in the expectation of finding ore.[96] As was said, in effect, by the United States Supreme Court, the identity of the vein at the point in question with that on the apex of which the location is laid is essential to the possession outside the lines of the claim. So long as the inclosing walls can be distinctly and continuously traced and mineral matter of the same character be found between them, there can be no doubt it is the same vein; but if the mineral disappears, or the fissure with its walls of the same rock disappears, and the identity can no longer be traced, then the right to follow the vein outside the perpendicular lines of the survey is lost.[97]

No decision has been rendered by the United States

93 Leadville M. Co. v. Fitzgerald, 4 Mor. Min. Rep., 380 (Colo.); Stevens v. Williams, 1 McCrary, 480. See also Stevens v. Gill, 1 Mor. Min. Rep., 566-576.

94 Iron Silver M. Co v. Elgin M. Co., 118 U. S., 196; Jupiter M. Co. v. Bodie M. Co., 11 Fed. Rep., 666; Cheesman v Shreeve, 37 Fed. Rep., 36; 40 Fed. Rep., 787; Doe v. Waterloo M. Co., 54 Fed. Rep., 935; Cons. Wyoming M. Co. v. Champion M. Co., 63 Fed. Rep., 540.

95 Gilpin v. Sierra Nevada M. Co., 2 Idaho, 662.

96 Iron Mine v. Loella Mine, 3 Fed. Rep., 368; S. C. Iron Silver M. Co. v. Murphy, 1 Mor. Min. Rep., 548; Hyman v. Wheeler, 29 Fed. Rep., 347; Fitzgerald v. Clark, 17 Mont., 100.

97 Iron Silver M. Co. v. Cheesman, 116 U. S., 529.

Supreme Court as to whether or not the locator of a claim on the dip of a vein acquires any right thereby, although the language used in the case of Flagstaff M. Co. v. Tarbet[98] would indicate that in the opinion of the court such a location would be valid so long as it interfered with no rights acquired by the location of the apex, the language used by the court being as follows: "Though it should happen that the locator, by sinking shafts to a considerable depth, might strike the same vein on its subterranean descent, he ought not to interfere with those who, having properly located along the vein, are pursuing their right to follow the dip in a regular way. So far as he can work upon it and not interfere with their right he might probably do so."

Two decisions upon this subject, viz., Van Zandt v. Argentine M. Co.[1] and Montana Co. v. Clark,[2] seem to be opposed both to reason and to the law as found in the statute and decisions. In the first of these cases it was held that a prior locator on the dip of a lode has a right to that portion of the lode inside the surface lines of his claim as against a subsequent locator of the apex. In the other it was held that the locator of the apex had no right to follow the vein on its dip outside his surface boundaries, by reason of the fact that his claim had only one end line, running thence to a point, and that the owner of a claim located upon the dip of said lode had no right to work the lode because he had not the apex; the court laying down the unreasonable rule that no one, under the law, could acquire any right to work that portion of the lode lying outside of the apex location.

A lode claimant has no right to follow his lode on its dip under an agricultural claim which was entered prior to the location of the mining claim.[3]

A miner has no right to surface ground in following his lode on the dip.[4]

98 98 U. S., 463.

1 2 McCrary, 159.

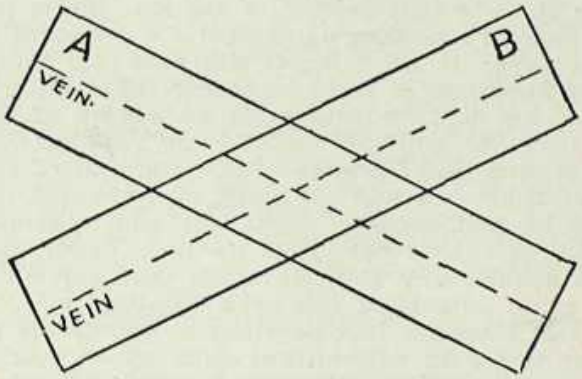
2 42 Fed. Rep., 626.

3 Colorado Central Cons. M. Co. v. Turck, 4 U. S. App., 290; 12 U. S. App., 85; 50 Fed. Rep., 888; Amador-Medean G. M. Co. v. South Spring Hill G. M. Co., 13 Sawy., 523; 36 Fed. Rep., 668; Pacific Coast M. & M. Co. v. Spargo, 16 Fed. Rep, 348.

4 Bullion-Beck & Champion M. Co. v. Eureka Hill M. Co., 5 Utah, 3.

CROSS VEINS.

Section 2336, U. S. Revised Statutes[5] evidently contemplates that veins will be found crossing one another and that locations may be made upon such cross veins, forming what might be termed cross locations.[6] To a correct understanding of this subject, Sections 2322[7] and 2336 must be read together. It will be noticed that Section 2322 provides that "the locators of all mining locations heretofore made or which shall hereafter be made, on any mineral vein, lode, or ledge * * * where no adverse claim exists on the tenth day of May, eighteen hundred and seventy-two, * * * shall have the exclusive right of possession of all the surface included within the lines of their locations, and of all veins, lodes and ledges throughout their entire depth, the top or apex of which lies inside of such surface



lines extended downward vertically." * * * Suppose A. to be the prior location, the claims A. and B. crossing each other. Two widely variant positions are taken by the courts as to the relative rights of the owners of two claims so located. In the first view, A., being the first location, the owner would own all of the surface and of the vein at its intersection; while

5 See p. 121.
6 Cheesman v. Hart, 42 Fed. Rep., 98.
7 See p. 120.

the owner of B. would have a right to work the B. vein throughout its entire length except at the point of intersection of the two veins. This is the construction given by the Colorado and Montana courts.

"Under Sections 2322 and 2336, U. S. Rev. Stat., when a junior mining location crosses a seinor location, and the veins therein are cross veins, the junior locator is entitled to all the ore found in his vein within the side lines of the senior location, except at the space of intersection. In such a case a junior locator has a right of way for the purpose of excavating and taking away the mineral contained in the cross veins."[8]

The courts of Arizona and California, on the other hand, hold that, on the location of the A. claim, the locator became the owner (under Sec. 2322) of every lode having its apex inside of such claim, which would include, of course, the B. lode, and hence, when the B. claim was located, that part of the B. lode inside the A. claim was already owned by the A. claimant, from which it follows that the B. locator could acquire absolutely no right to that portion of his lode within the A. claim.[9] This latter view would seem to be the more reasonable, as it gives full effect to both sections of the statute, while under the construction first stated a conflict must be admitted to exist between said sections. As the point has never been passed upon by the United States Supreme Court, the authorities seem equally divided, and cases will continue to be decided according to the views of the courts of the various jurisdictions.

Following out these different lines of reasoning, contrary opinions are reached as to the effect of failure of the owner of the prior claim, A., to file an adverse claim if the claimant of the subsequent location files an application for patent including therein the conflict between the two claims. One line of decisions holds that, by failure to adverse such an application for patent, the senior locator loses his right to the surface conflict and to the lode at the point of intersection of the two lodes, but does not lose the remainder

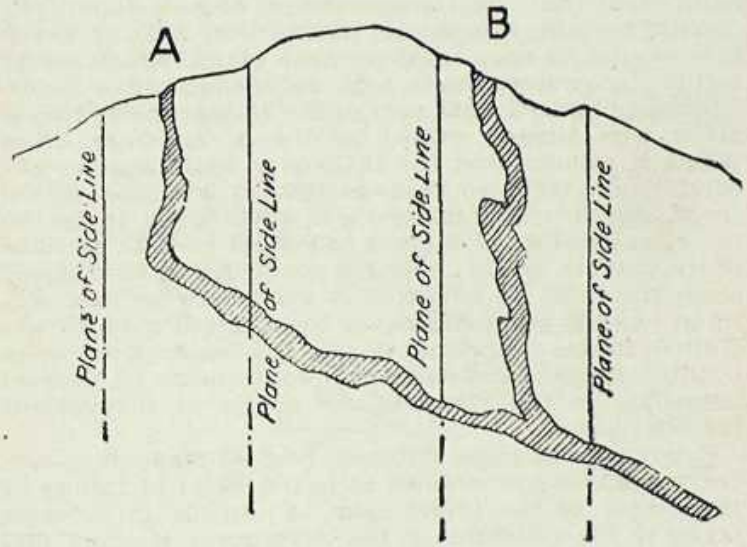
8 Branagan v. Dulaney, 8 Colo., 408. See, also, Lee v. Stahl, 9 Colo., 208, 13 Colo., 174; Pardee v. Murray, 4 Mont., 234.

9 Watervale M. Co. v. Leach, 33 Pac. Rep., 418 (Arizona); Wilhelm v. Sylvester, 101 Cal., 358.

of his lode, even in the conflict between the claims;[10] while another line of decisions holds that by such failure to adverse, the senior locator loses the surface conflict and everything within it.[11]

UNION OF VEINS.

The last sentence of section 2336, United States Revised Statutes, evidently refers to the union of veins



on their dip, and it seems to be agreed that the older possessory title will take the vein below the point of union in a case like that shown by the above diagram.

10 Branagan v. Dulaney, 8 Colo., 408; Lee v. Stahl, 9 Colo., 208, 13 Colo., 174; Harris v. Equator M. Co., 8 Fed. Rep., 863.

11 Watervale M. Co. v. Leach, 33 Pac. Rep., 418 (Arizona); Wilhelm v. Sylvester, 101 Cal,, 358.

Here, if A. is the prior location, the owner, following the lode on its dip, will pass into the B. claim, where the two veins unite, and will take the entire vein, leaving the owner of the junior location only that vein between the apex in the B. claim and the point of union of the two veins.

THE LEGAL TITLE.

The preceding paragraphs illustrate the steps necessary to acquire and hold a mining claim by possessory right. The greater proportion of mining claims are so held, either because they are not considered valuable enough to warrant an attempt to acquire the fee-simple title; because such procedure would invite the assertion of adverse claims, with much vexatious litigation; or because the owner is working his claim on an extensive scale and does not feel the need of the legal title. Some of the most valuable mining claims are held by the uncertain tenure of annual labor. Such title may be sufficient ordinarily, but the legal title evidenced by a patent from the Government is much better, as its issue determines forever all controversies relative to surface conflicts, obviates the necessity of any further expenditure for annual labor, and enables the owner to dispose of the mine more readily should he desire to do so. Brief reference to the procedure necessary to secure the legal title of the Government by patent will now be made.

PATENTS FOR LODE CLAIMS.

The procedure for acquiring patent for mining claims of this character is governed by Section 2325, United States Revised Statutes, and by the mining circular of December 15, 1897.[12]

SURVEY.

The first step necessary is for the claimant to procure an official survey of his claim to be presented to

12 See pp. 119 to 171 inclusive.

the proper local land office as a part of his application for patent. This requires an application to the Surveyor General of the United States for the surveying district where the land for which patent is desired is situated. Each State or Territory is a surveying district, the Commissioner of the General Land Office being ex officio Surveyor General for the district of Arkansas.[13]

No particular form of application is required, although the official form referred to contains all the data necessary.[14] Upon the receipt of such application the Surveyor General will advise the applicant of the amount of money estimated as necessary for the office work in connection with the survey of the claim. The claimant should then deposit such amount with any Assistant United States Treasurer, or designated depository, in favor of the Treasurer of the United States, to be passed to the credit of the fund created by "individual depositors for the survey of the public lands." Of the certificates of deposit, which are issued in triplicate, the depositor should forward the original to the Secretary of the Treasury, the duplicate to the Surveyor General, and retain the triplicate for his own protection. Upon the receipt of the duplicate certificate, the Surveyor General will issue an order for the survey to the Deputy Mineral Surveyor, selected by the applicant, if no objection to such designation appears.[15]

The law, and the regulations thereunder (Sec. 2334, U. S. Rev Stat., and paragraph 92),[16] authorize the applicant for a mineral survey to employ any United States Deputy Mineral Surveyor he chooses to execute the field work of his survey, and the contract between them is entirely a private matter, relative to which the Government will assume no responsibility.

UNITED STATES DEPUTY MINERAL SURVEYORS.

Inasmuch as this portion of the book is written for

13 See p. 172, Mineral Law Digest.
14 See par. 46, p. 141.
15 See form 4-682, p. 158, Mineral Law Digest.
16 See pages 164 and 165.

the information of all persons who have an interest in the public mineral lands, it is appropriate that it contain a paragraph on the subject indicated in the caption. Under Section 2334, United States Revised Statutes, the United States Surveyor General has authority to appoint as many competent Deputy Mineral Surveyors in his district as apply for appointment. The person appointed need not necessarily be a resident of the district for which appointment is made, and there are a number of instances where Deputies hold appointments in two or more districts.[17] Applications for appointment should be made to the Surveyor General for the district in which the appointment is sought. This application need not be formal. Upon receipt of an application, the Surveyor General may determine for himself the applicant's qualifications as to character and professional skill in any manner he deems fit, and, should he be satisfied in this regard, the applicant will be required to furnish a bond in the sum of $10,000 for the faithful performance of his official duties. Upon the filing of said bond, if accepted by the Commissioner of the General Land Office, the Deputy will take the usual oath of office, and thereafter will be duly qualified to make contracts for the survey of the mineral lands. Information as to bonds may be had of the various Surveyors General. The appointments of Deputy Mineral Surveyors are not made for any fixed period of time. The tenure under such appointment depends largely upon the manner in which they execute the work intrusted to them.[18]

Under recent legislation (Act of March 2, 1895, 28 Stat. 807), the Surveyor General is required to examine all bonds executed by Deputy Mineral Surveyors every two years as to their sufficiency. Should he deem a bond insufficient because of the death or insolvency of sureties, he may require a new one, and failure to furnish it is cause for the revocation of the Deputy's appointment.

The Surveyors General have authority to suspend or revoke the appointments of their Deputy Mineral Sur-

17 Charles W. Helmick, 20 L. D., 163. (Revoking S. C., 18 L. D., 601).

18 Circular of Nov. 13, 1877, Copp's Mineral Lands (2d Ed.), 61; 5 C. L. O., 35.

veyors for cause, subject to the approval of the Commissioner of the General Land Office. From such action by the Surveyor General the Deputy has the right of appeal in the usual manner.[19] The appointment of United States Deputy Mineral Surveyors is a matter in which the discretion of the United States Surveyor General will be recognized.[20]

A bondsman of a Deputy Mineral Surveyor should not be allowed to disclaim arbitrarily further responsibility for the acts of the Deputy, but the Deputy should be allowed to furnish a new bond.[21]

The General Land Office encourages the appointment of as many "competent Deputy Mineral Surveyors as apply for appointment," to the end that "claimants may have a choice of Deputies and be enabled to have their work done on the most advantageous terms."

The money deposited by the claimant for "office work" is expended in the employment of competent persons to examine the returns of the Deputy Mineral Surveyor, make the necessary corrections, prepare the necessary transcripts of field notes and plats, and to pay for the stationery used for such purpose.

The money deposited, if unexpended, may not be repaid,[22] and the certificate of deposit is not assignable, but the depositor, if the survey for which the deposit was made is not executed, may apply the deposit on another survey.[23]

The applicant for a mineral survey should be required to deposit only the sum necessary to defray expenses of work in the office of the United States Surveyor General, not for the work of the Deputy Surveyor, by whom the survey is to be made.[24]

A deposit of $320 for the office work in connection with an application covering ten mineral locations and two mill sites was held not to be an unreasonable sum.[25]

19 Robert Gorlinski, 20 L. D., 283.

20 William E. Jacobs, 21 L. D., 379.

21 Com'r to Surveyor General of Montana, Sept. 10, 1894. See, also, 7 Opp. Atty. Gen., 62.

22 Elijah M. Dunphy, 8 L. D., 102.

23 Com'r to G. W. Park, July 13, 1896.

24 G. B. Foote, 2 L. D., 773.

25 Montana M. & Red. Co., 16 C. L. O., 269.

Where an amendment of a mineral survey is of such character as will not require an entirely new plat and field-notes, the charge for office work should not be as much as in case of an original survey.[26]

The details relative to the field work on the survey of mining claims may be found in the Official Circular of Instructions to United States Deputy Mineral Surveyors,[27] and the Deputy is governed by regulations he must observe without regard to the opinions or suggestions of the claimant. It is therefore not deemed necessary to consider this branch of the subject at length, inasmuch as the claimant is not required to exercise any discretion in the matter. It may, however, be stated that should a claimant dictate the manner of making any part of the survey, he is alone responsible if the Deputy's returns are rejected because of conflict with the regulations. The mineral claimant may, however, acquire much valuable information by an examination of the instructions cited, and a knowledge of the requirements thereof may enable him to so perfect his location that the surveyor will have but little trouble when he comes to do the work in the field and to prepare his notes and report thereon.

Should the notes of survey returned by the Deputy be found correct and in accordance with the regulations, the Surveyor General will prepare four plats and one copy of the original field notes, which are disposed of as follows: One plat and the original field notes are retained in the office of the Surveyor General, two copies of the plat and one copy of the field notes are given the claimant, that he may, in connection with his application for patent, post one plat on the claim and file the other plat and the copy of field notes in the local land office, with the other papers.

The remaining plat is forwarded by the Surveyor General to the local land office to be permanently retained in the files there for reference.

The plats of mineral surveys, prepared for the claimant, the local land office and the General Land Office should all be signed by the Surveyor General, all being originals. Blue-print copies should not be made instead of originals.[28]

26 Com'r to Surveyor General of California, Jan. 2, 1892.

27 See pp. 149 to 171, inclusive, Mineral Law Digest.

28 Com'r to Surveyor General of New Mexico, Sept. 17, 1891.

It cannot be objected that any plats or field-notes are copies and not originals in a mining case, as four plats and field-notes in duplicate are prepared by the Surveyor General.[29]

The survey having been properly executed, the claimant is ready to proceed to the next step, which is the

POSTING OF PLAT AND NOTICE OF APPLICATION ON THE CLAIM.

Prior to filing his application for patent the claimant must post on the claim in a conspicuous place a copy of the plat furnished him by the Surveyor General, and a notice of said application for patent.

This notice should contain the name of the claim for which application is to be made, the extent of surface ground claimed, the situation thereof by mining district, county and State, a brief but complete description of the claim by metes and bounds taken from the official field notes, and the place of record of the location certificate. This is dated and signed by the claimant.[30]

A mineral application presented at the local office before the plat and notice have been posted on the claim has been held to be void.[31] Failure to post the plat and notice in a conspicuous place necessitates new notice by publication and posting.[32] In the consideration of controversies relative to the place of posting the rulings have been to this effect:

An open shaft-house is a "conspicuous place" upon a claim for posting of notice of application for patent;[33]

Posting of plat and notice of application for patent upon a shaft-house is posting in a conspicuous place, as "the shaft-house is certainly the most conspicuous object on a mining claim, especially where, as in the case at bar, there were no other improvements;"[34]

29 Juniper Mine, 4 C. L. O., 115.

30 For a full discussion of what the posted notice should contain see Publication, p. 77. See paragraph 44, Regulations p. 140.

31 De Long v. Hine, 1 L. D., 545.

32 Ferguson v. Hanson, 21 L. D., 336.

33 Louisville Lode, 1 L. D., 548.

34 Gowdy v. Kismet G. M. Co., 22 L. D., 624.

The plat and notice of application for patent for a mining claim may be posted upon ground excluded from the application if in a conspicuous place;[35]

A mineral entry may be referred to the Board of Equitable Adjudication, where posting of plat and notice of application for patent was not made on the claim owing to inaccessibility and danger of snow slides, but in a conspicuous place on an adjoining claim;[36]

Only one plat is required to be made and posted on a consolidated claim,[37] but when the application includes a lode and millsite, the notice should be posted on both.[38]

With the application for patent must be filed a copy of this notice and an affidavit by at least two witnesses as to the fact of such posting. The usual method of making proof in this particular is by an affidavit by the two witnesses, which incorporates a copy of the notice posted.[39] The affidavit of posting should be specific as to the date such posting commenced.[40]

It is too late to raise a technical objection to the affidavit of posting the plat and notice after action on said affidavit and the allowance of the entry. The affidavit of posting may be properly made by a claimant whose knowledge of the fact is derived from personal observation at various times of the plat and notice as posted, and from such information with respect thereto as could be accepted by a reasonably cautious man.[41]

APPLICATION FOR PATENT.

Following the posting on the claim, the claimant should next file his application for patent.

A filing fee of $10 must be paid to the local land officers for each application or adverse claim that is

35 Hughes v. Gilbert, 2 L. D., 756.

36 Rowena Lode, 7 L. D., 477.

37 S. F. Mackie, 5 L. D., 199; Com'r to Pueblo land office, Jan. 12, 1897, in re Engineer Lode.

38 Bailey & Grand View M. & Sm. Co., 3 L. D., 386; New York Lode and Millsite, 5 L. D., 513.

39 See paragraph 45, Regulations p. 141. See form, p. 181.

40 Prince of Wales Lode, 2 C. L. O., 2.

41 Bright v. Elkhorn M. Co., 9 L. D., 503.

received and placed of record. Should the application or adverse claim be rejected, no fee is charged. Only one fee may be charged for an application, whether it embraces one location, or a consolidated claim containing many locations.[42]

The application for patent required by Section 2325, United States Revised Statutes,[43] need not follow any particular form, but should contain a brief statement showing the name of the claim, the character of deposit claimed, an allegation of present ownership, and a description of the land. The term "application for patent" is usually applied to the affidavit constituting the formal application. In fact, the term includes all papers required to be filed at this time, and which go to show a legal location, title thereunder and compliance with law by the applicants or their grantors. It is usual to make reference in the application (using this word in its restricted sense) to the various other papers filed and which are in reality a part thereof. This "application" must be under oath, and when filed and placed of record operates as a segregation of the land described therein from other appropriation while of record. It may include any number of contiguous locations held in common, whether lode or placer, and, of course, each location should be made a part of the official survey heretofore mentioned.[44]

An application must be sworn to by the party making it.[45] An application for a mining claim signed by one joint owner for himself and co-claimants should be recognized as the application of all the owners; the acts of the agents are the acts of the claimants themselves.[46] Applications may be made by residents tem-

42 Sec. 2238, U. S. Rev. Stats., par. 9, provides for the payment of "A fee of five dollars for filing and acting upon each application for patent or adverse claim filed for mineral lands, to be paid by the respective parties." (The fee of five dollars is paid to each of the local officers).

43 See p. 136.

44 Form of application, see p. 182. St. Louis Smelting Co. v. Kemp, 104 U. S., 636; Good Return M. Co., 4 L. D., 221; Samuel E. Rogers, 4 L. D., 284; Champion M. Co., 4 L. D., 362; S. F. Mackie, 5 L. D., 199; William DeWitt, 9 C. L. O., 34. (The above decisions overrule the Circular of June 8, 1883, and Lake Quicksilver M. Co., 2 C. L. O., 130). Circular of March 24, 1887, under Good Return decision, 8 L. D., 505.

45 Jefferson M. Co. v. Pennsylvania M. Co., 1 C. L. O., 66.

46 Ayers v. Daly, 3 C. L. O., 196.

porarily absent from the land district by an agent.[47] The affidavits required of an applicant for a mineral patent may not, under the act of January 22, 1880,[48] be made by an agent if the applicant is a resident of, or at date of making proof within, the land district, even if the agent is the only one personally cognizant of the facts constituting compliance with the law.[49]

The filing of an application for a mineral patent bars the receipt of another application for the land.[50] Mere application for patent for a mining claim, not followed by notice thereof, is not a segregation of the land, and confers no rights on which others are bound to wait indefinitely, and it is the practice to reject such an application without the formality of notifying the applicant and giving him an opportunity to show cause why such action should not be taken.[51] Should it appear, however, that posting and publication have been made, an application cannot be rejected without the formality of notice to the applicant and a hearing as to the charge of abandonment.[52]

An applicant for patent must show the claim to be valuable for mineral.[53] An application for claims not owned in common will be canceled as to those of the locations not so owned, and if none of the locations are held in common the application will be canceled as an entirety.[54]

A mineral application should not be received for land covered by a homestead entry, but upon its tender a hearing should be ordered to determine the character of the land. (In such case the erroneously filed application was allowed to stand pending such a hearing.)[55] The proper land office in which to file an application for patent or an adverse claim is the land office having

47 Topsy Mine, 7 C. L. O., 20.

48 See p. 137.

49 Rico Lode, 8 L. D., 223.

50 Great Eastern M. Co. v. Esmeralda M. Co., 2 L. D., 704; Gunnison Crystal M. Co., 2 L. D., 722; Hall v. Street, 3 L. D., 40; Rocky Lode, 15 L. D., 571.

51 Snow Flake Lode, 4 L. D., 30.

52 See p. 89 and Moylan C. Fox, 2 L. D., 766.

53 Morrill v. Margaret M. Co., 11 L. D., 563.

54 Com'r to Helena office, Aug. 5, 1893, in re Forest & Louis G. Lodes.

55 Hooper v. Ferguson, 2 L. D., 712.

jurisdiction of the land in question at the time of filing.[56] Where a party commences proceedings for a mining patent on unsurveyed land in a certain land office, under the erroneous belief that such claim is within that land district, he must, on discovering his mistake, commence de novo before the proper land office.[57] The owner of a mining claim need not apply for a patent therefor until he so chooses.[58] But until he does so, makes entry and secures patent, his title is possessory, and is liable to forfeiture by a failure to comply with the conditions imposed by the statutes.

PROOF OF POSSESSORY TITLE.

The applicant must also at this time file evidence of title. This, according to paragraph 47 of the mining regulations,[59] should consist, if the applicant claims as sole locator, of a copy of the location notice certified by the recorder in charge of the records where the same is recorded, and his affidavit to the effect that he has not disposed of the land so located and applied for. In case the applicant is a locator with others, and claims to have acquired all interest in the property by purchase or forfeiture proceedings[60] he must furnish in addition to the location notice, a complete abstract of title from date of location brought down to date of application, showing the entire possessory title to be vested in him. If he claims by purchase solely, a similar abstract is required. The certificate of the recorder should show that there are of record no other conveyances affecting the land applied for.

Should it happen that entry is made in the names of parties other than the applicants for patent, or that the name of an applicant is omitted, or that additional parties are joined in entry with the original applicants, it is required that the abstract be brought down to date of entry, that patent may issue to those who appear to possess title at that date.[61] The Land Department,

56 Frederick A. Williams, 16 C. L. O., 110.

57 Barthel Jacobs, 12 C. L. O., 158.

58 Lebanon M. Co. v. Cons. Republican Mtn. M. Co., 6 Colo., 381.

59 Approved December 15, 1897, page 141.

60 Sec. 2324 U. S. Rev. Stat., p. 124.

61 Com'r to Moses M. Strong, Aug. 3, 1891, Reed and Hillary Lodes.

however, does not trace title beyond date of entry.[62] It is often the case that numerous transfers are made subsequent to entry (payment for the land) and prior to the issuance of patent. The recognition of these transfers and an attempt to issue title in accordance therewith, would cause much unnecessary labor for the Land Department, as well as be productive of confusion. It has therefore wisely been made the rule to merely require proof of paper title to date of application in the first instance, and to require its extension to date of entry only in case the final certificate of entry shows changes from the abstract of title first furnished. Indeed no harm would be done if changes in title subsequent to filing of application were ignored entirely, and patent issued to the parties then shown to be entitled thereto. Under the decisions the title as patented would vest in the applicant's grantee as in case of ordinary transfers where one holding an equitable title attempts to convey a fee simple title, the fee simple title subsequently acquired by him, vesting in his grantee by relation. However, as it has been held[63] that an entryman secures a further and different title than the applicant, it seems to be the better practice in case the record discloses any transfers prior to entry to have the patent issue to the ones in whom the full legal title was at that date. The names of co-owners who are shown by the abstract to have title, inadvertently omitted from the application for patent, may be subsequently supplied.

In case the abstract shows title in co-owners omitted from the application, the names of such will be inserted in the entry unless it be established that the interests of such co-owners were regularly and legally forfeited prior to date of entry, by proceedings under Section 2324, U. S. Revised Statutes.[64]

As stated on page 49, the former practice of the Land Department was to take no notice of the fact that a co-owner's name was omitted from an applica-

62 F. P. Harrison, 2 L. D., 767; Whittaker v. S. P. R. R. Co., 7 C. L. O., 85; Ophelia Pope Lowe (review), 9 C. L. O., 192.

63 Black v. Elkhorn M. Co., 163 U. S., 445; 49 Fed. Rep., 549.

64 See p. 124.

tion for patent, the requirement being that a co-owner should protect his rights by filing an adverse claim;[65] but by a recent decision[66] the rule as laid down in the case of Turner v. Sawyer (150 U. S., 578-586), has been recognized, and made the rule of the Department.

The practice of the Land Department, when the abstract of title shows a party possessing an interest who is not joined as entryman, is to require the entryman to show cause why the name of such co-owner should not be inserted in the final certificate of entry. If no showing is made within the time specified, the name is inserted and the entry proceeds to patent.

The abstract must show all the locations of a group of claims covered by one application for patent to be held in common, and the entry will be canceled as to those locations not so owned.[67]

If the abstract shows that at date of application the applicant had no possessory title, the entry will be canceled.[68] A defective abstract of title may be explained or supplemented by affidavits.[69]

One basing title upon a relocation need not trace title back of such relocation.[70] Should a relinquishment of entered ground be made, a continuation of the abstract to date of relinquishment will be required to show that the one executing the same had the right to do so.[71]

As a general rule, it may be stated that the abstract of title required in connection with an application for a mining patent must show all the transactions affecting in any manner the possessory title. The Land Department ordinarily does not pay any attention to anything but absolute conveyances, although in a few instances, for the purpose of preventing hardship, it has recognized deeds which were in fact mortgages or

65 Grampian Lode, 1 L. D., 544; Lucy B. Hussey Lode, 5 L. D., 93; Monitor Lode, 18 L. D., 358; Gold Dirt Lode, 10 C. L. O., 119; J. Q. S. Lode, 10 C. L. O., 206.

66 Thomas v. Elling, 25 L. D., 495.

67 Com'r to Helena office, Aug. 5, 1893, in re Forest & Louis G. Lodes.

68 Montana Company, 6 L. D., 261.

69 Com'r to Helena office, Sept. 26, 1894, in re Grubstake and Homestead Lodes.

70 Gold Dirt Lode, 10 C. L. O., 119.

71 Com'r to Pueblo office, Sept. 30, 1895, in re Lookout Lode; Ground Hog Lode, 20 L. D., 211.

contracts for conveyance before application, if full title was acquired before patent.[72]

STATUTE OF LIMITATIONS.

Section 2332, United States Revised Statutes, provides that "where such person or association, they or their grantors, have held and worked their claims for a period equal to the time prescribed by the Statute of Limitations for mining claims of the State or Territory where the same may be situated, evidence of such possession and working of the claims for such period shall be sufficient to establish a right to a patent thereto under this chapter in the absence of an adverse claim."

This section of the statute may be invoked in case the records of mining claims have been lost or destroyed through lapse of time or by accident, or in cases where no record was ever made of location or of transfers of title.[73]

The applicant desiring to make proof of title under this section should file (1) a duly certified copy of the Statute of Limitations of the State or Territory; (2) his affidavit reciting the facts relative to the origin of his title, the continuance of his possession of the mining ground applied for, the area thereof, the nature and extent of the mining operations of himself and grantors, whether his possession has ever been opposed, when and through what proceedings such opposition, if any, ceased, and any and all other facts within the applicant's knowledge which he desires to submit as bearing upon his right to the land; (3) a certificate under seal of the court having jurisdiction of mining cases within the judicial district embracing the claims, which certificate should show that no suit affecting the title to said mining claim is pending, and that there has been no litigation before said court affecting the title to said claim or any part thereof for a period equal to the time fixed by the Statute of Limitations of the State or Territory wherein said claim is situate, other than that which has been finally decided in favor of the applicant; and (4) he should sup-

72 White Extension West Lode, 22 L. D., 677.

73 For form of proof see page 208.

port this showing by corroborative testimony in the form of affidavits by disinterested persons familiar with the facts in the case.

CITIZENSHIP.

The statute[74] prescribes that only citizens of the United States, or those who have declared their intention to become citizens, may locate, hold or secure patent for the public mineral lands of the United States.[75]

Those who may take under this section are individuals, unincorporated associations of individuals and corporations. A resident of the United States is prima facie a citizen.[76] No distinction on account of sex is made as regards persons qualified as to citizenship;[77] and the statutes make no requirement as to age.[77] Married women, if citizens, may take mineral lands,[78] and a married woman, born an alien, is qualified as to citizenship if her husband is a citizen or has declared his intention to become one.[79] It has also been held that the marriage of an alien widow residing in the United States, to a citizen during the minority of the widow's child, renders the child a citizen.[80]

The child born abroad of American parents, there temporarily sojourning, is a citizen of the United States.[81] Mexicans residing in California at the time of its cession to the United States, became citizens of the United States unless they elected otherwise within one year.[82] An Indian born within the territorial limits of the United States, who has abandoned the tribal relation and adopted the customs of civil-

74 Sec. 2321, U. S. Rev. Stat., p. 149.

75 O'Reilly v. Campbell, 116 U. S., 418; North Noonday M. Co. v. Orient M. Co., 1 Fed. Rep., 522; Kempton Mine, 1 C. L. O., 178.

76 Jantzen v. Arizona Copper Co., 20 Pac. Rep., 93.

77 Com'r to Eureka office, Nov. 13, 1877, 4 C. L. O., 179; Thompson v. Spray, 72 Cal., 528; Com'r to Francis Cunningham, 7 C. L. O., 179.

78 Com'r to A. R. Dickey, Dec. 19, 1891.

79 Bogart v. Daniels, 18 L. D., 528.

80 State v. Newell, 45 N. Y. St., 38; U. S. v. Keller, 11 Biss., 314; Com'r to Pueblo office, Feb. 8, 1896.

81 Gaby v. Thompson, 19 L. D., 282.

82 9 Stat., 922-929; Jones v. S. P. R. R. Co., 19 L. D., 270; Aubrey v. Clapp, 8 C. L. O., 193.

ized life, is a citizen of the United States under Section 6 of the act of February 8, 1887.[83]

The members of an association unincorporated must be individually qualified. The proof of citizenship in such a case may be made by a duly authorized agent.[84]

While the earlier cases held that an alien could not locate or convey mining claims,[85] the more recent cases lay down the rule that the title of a claimant of the public mineral lands as locator of a mining claim may not be questioned on the ground of alienage by anyone excepting the United States, or in proceedings to obtain a United States patent (on adverse suit),[86] and if an alien locates and performs all acts necessary to a valid location, and then sells to a citizen, such citizen thereby acquires and holds a valid title as against all persons having no right in the premises, before conveyance by the alien.[87]

The courts have not only held that a mining claim illegally initiated by an alien, may be validated by a subsequent declaration of intention to become a citizen if made before the intervention of any adverse rights,[88] but they have gone to the extent of holding that when the alienage of an applicant for United States patent is set up by an adverse claimant, the declaration of intention to become a citizen, made by the applicant during the pendency of the adverse suit, but before judgment, will render his title good as far as citizenship is concerned.[89]

The effect of these decisions is to place the alien on

83 24 Stat., 388; Turner v. Holliday, 22 L. D., 215.

84 Paragraph 68, Mining Circular, approved Dec. 15, 1897, p. 149.

85 Lee v. Justice M. Co., 2 Colo. App., 112; 29 Pac. Rep., 1020; Bohanon v. Howe, 2 Idaho, 417; Lee Doon v. Tesh, 68 Cal., 43; Territory v. Lee, 2 Mont., 124; Tibbetts v. Ah Tong, 4 Mont., 536; Anthony v. Jillson, 83 Cal., 296; Golden Fleece G. & S. M. Co. v. Cable Cons. M. Co., 12 Nev., 312, 15 Nev., 450.

86 Billings v. Aspen M. & Sm. Co., 51 Fed. Rep., 338, 52 Fed. Rep., 250, 10 U. S. App., 1, 322; Wood v. Aspen M. & Sm. Co., 36 Fed. Rep., 25.

87 North Noonday M. Co. v. Orient M. Co., 1 Fed. Rep., 522.

88 Golden Fleece M. Co. v. Cable Cons. M. Co., 12 Nev., 312, 15 Nev., 450; Croesus M. Co. v. Colorado Land & M. Co., 19 Fed. Rep., 78; North Noonday M. Co. v. Orient M. Co., 1 Fed. Rep. 522.

89 Manuel v. Wulff, 152 U. S., 505.

practically the same footing as the citizen so far as the possessory title to mining claims is concerned, and is apparently in contravention of both the letter and spirit of the statute.

An alien twenty-one years of age, who has been honorably discharged after serving an enlistment in the United States army, occupies the status of one who has declared his intention of becoming a citizen.[90]

A Chinaman cannot become a naturalized citizen.[91] Natives of Alaska are not Indians[92] and cannot acquire title to public lands, their status being as yet undetermined.[93]

A corporation is a citizen of the State where incorporated[94] and is an individual,[95] the stockholders being presumed to be citizens of the United States.[96]

When created under the laws of any of the United States a corporation is competent to locate or to join with others in the location of a mining claim.[97]

PROOF OF CITIZENSHIP.

The manner of making proof of citizenship, as required by paragraphs 68 to 75 inclusive, of the mining regulations,[98] will now be considered.

An affidavit of citizenship made by a mineral claimant is not only good evidence under the law before the Land Department, but in any proceedings based on Chapter 6, Title XXXII, United States Revised Statutes.[99] This affidavit should show whether the claim-

90 Sec. 2166, U. S. Rev. Stat.; Smith v. U. S., 16 L. D., 352.

91 Sec. 2169, U. S. Rev. Stat., as amended by act of Feb. 18, 1875; 18 Stat., 318; Chung Choy, 15 C. L. O., 147.

92 John Brady, 19 L. D., 323.

93 Opinion Asst. Atty. Gen., 19 L. D., 323, citing Waters v. Campbell, 4 Sawy., 121.

94 Ohio & M. R. R. Co. v. Wheeler, 1 Black, 286; Eaton v. St. Louis M. & Sm. Co., 7 Fed. Rep., 139.

95 Telford v. Keystone Lumber Co. (Review), 19 L. D., 141. See, also, McKinley v. Wheeler, 130 U. S., 630.

96 Doe v. Waterloo M. Co., 70 Fed. Rep., 455.

97 North Noonday M. Co. v. Orient M. Co., 1 Fed. Rep., 522.

98 Approved Dec. 15, 1897, page 149; Sec. 2 act of April 26, 1882. 22 Stat., 49, page 156.

99 North Noonday M. Co. v. Orient M. Co., 1 Fed. Rep., 522. See, also, S. C., 11 Fed. Rep., 125.

ant is a native born or a naturalized citizen, when and where born, and his residence. If he has declared his intention to become a citizen, or has been naturalized, his affidavit must show the date, place, and the court before which he declared his intention or from which his certificate of naturalization issued. If he claims citizenship by virtue of his father's naturalization, his affidavit should contain the statement as to date, place and court as in case of his own naturalization.[1]

An affidavit of citizenship of a mineral claimant, made outside of the United States, must be made before a United States consular officer.[2]

The heirs of a decedent who make application or entry, must show citizenship of such decedent,[3] and when application is made by a trustee, not only the citizenship of the trustee, but that of the beneficiary, must be proved.[4]

In case of an association unincorporated, the affidavit of citizenship may be made by the agent of the applicants on his own knowledge, or upon information and belief, provided he accompanies the affidavit with a power of attorney from the persons forming such association authorizing him to act for them in the matter of their application for patent. In case such association is not represented by an agent, each individual composing the same is required to execute and file his own affidavit.

A corporation must file a copy of its charter or a certificate of its incorporation, certified by the proper officer in the State where it is operating. For example, a corporation organized under the laws of New York, when filing an application for lands situated in Montana, must furnish a copy of its charter or articles of incorporation certified by the Secretary of State of Montana.

A properly authenticated certificate of the existence of a corporation, applicant for a mineral patent, is sufficient proof of citizenship under the statute. It

1 See form, p. 187.

2 Sec. 1750, U. S. Rev. Stat.

3 Com'r to Durango office, Feb. 14, 1896, Gulch & Lake View Lodes.

4 Departmental Circular, June 8, 1883, 2 L. D., 725; Capricorn Placer, 10 L. D., 641; paragraph 59, Mining Circular, p. 144.

is held not to be within the jurisdiction of the Land Department to inquire into the authority of a corporation under its charter, to take title to mineral lands. The inquiry can only go to the extent of determining whether the applicant is regularly incorporated under the laws of some one of the States, and has complied with the statutes of the State in which it is operating.[5]

Foreign corporations can acquire no right to a patent from the United States, and a citizen acting as trustee for such a corporation cannot make entry for its benefit,[6] as when application is made by a trustee, proof of citizenship of the beneficiaries is required, as above stated.

Under the act of March 3, 1887,[7] corporations making applications for mineral patents in the Territories of the United States, are required to show whether exceeding twenty per centum of the stock of said corporation is "owned by any person or persons, corporation or corporations, association or associations not citizens of the United States." In case the evidence furnished on this point shows alien ownership of more than twenty per centum of the stock, the application will be rejected, or the entry if made, canceled.

Secondary evidence of citizenship is accepted where it is shown to be impossible to furnish the affidavits of the parties themselves.

This secondary evidence may consist of the affidavits of disinterested parties having knowledge of the claimant's status in this regard, or by other evidence of whatever nature which raises a presumption of citizenship. To illustrate, it has been held that the oath to a notice of location required by the Montana statutes, in which it is asserted by one of several locators that all of the locators are citizens of the United States, is prima facie proof of such citizenship.[8] And evidence that one whose citizenship is in question, has voted,

5 Silver King M. Co., 20 L. D., 116; Rose Nos. 1 and 2 Lodes, 22 L. D., 83.

6 Capricon Placer, 10 L. D., 641; Hook v. Latham, 11 L. D., 425.

7 24 Stat., 476, amended by section 7, act of March 2, 1897. Sess. L. 2nd sess. 54th Cong., 618, 619, prohibits acquisition of title to public lands by aliens. See, also, 19 Op. Atty. Gen., 26.

8 Hammer v. Garfield M. & M. Co., 130 U. S., 291.

is admissible as tending to raise a presumption of citizenship, as fraud on the part of a voter is not to be presumed.[9]

Such secondary evidence must be accompanied by proof that the best evidence, i. e., the affidavit of the party himself, cannot be procured.

If an examination of the application for patent and the accompanying papers satisfies the Register that the claim was properly located and that title thereunder is vested in the applicants; that they are qualified as to citizenship; that the survey of the claim, if made by metes and bounds as in case of a lode claim, or a placer that does not conform to legal subdivisions, is regular; that a discovery of valuable mineral has been made; and that notice was duly posted on the claim, he will issue an order for publication of notice of application for patent.

PUBLICATION.

The notice published must contain all the essential details required in the notice posted as specified by paragraph 44 of the regulations;[10] that is, it must give the name of the claimant, the name of the claim, the mining district and county, whether or not the location is of record, and if so, where the record of location may be found, giving the book and page thereof, the number of feet claimed along the vein, and the presumed direction thereof, the number of feet claimed on the lode in each direction from the point of discovery or other well defined place on the claim, the names of all adjoining and conflicting claims, or if none exist, the notice should so state.

This is a recent revision of the regulation, the tendency being to require technical accuracy in the notices thus given by posting and publication, it being intended that adverse claimants, and citizens who may have knowledge of facts which, if disclosed, may render the claim invalid, shall have full information of the pendency of the application for patent.

9 S. P. R. R. Co. v. Brown, 9 L. D., 173; Jones v. S. P. R. R. Co., 19 L. D., 270.

10 Approved Dec. 15, 1897, page 140; Gowdy v. Kismet G. M. Co., 22 L. D., 624, 24 L. D., 191; 25 L. D., 216; Departmental Circular, March 11, 1897, 24 L. D., 266.

The statute says that notice shall be published "in a newspaper to be by him (the Register) designated as published nearest to said claim."[11] The regulation states that it shall be "a paper of established character and general circulation."

It has been held that the Register may exercise an official discretion in the designation of a newspaper. If the one published geographically nearest the land will not give the notice the greatest publicity, or if such paper is not one of reputable character, or if the one nearest in distance makes exorbitant charges, he may select another newspaper, although it may be further removed from the claim.[12]

This judicial discretion is, however, subject to the supervisory authority of the Commissioner of the General Land Office, and the Secretary of the Interior.[13]

The Register is not required to recognize the difference in distance between two papers published in the same city or town. All other things being equal, the wishes of the applicant as to the designation of the newspaper should be regarded.[14]

It should be observed that this notice must be published by direction of the Register, and it has been held that a notice published by the Receiver without the consent of the Register, was invalid.[15] But where the Register was suspended and the Receiver was directed to take charge of the office and received a mineral application, and directed publication of notice thereof, it was decided that his acts were those of an officer de facto, acting colore officii, and were valid.[16]

It has been held by the General Land Office that if a published notice is defective in some material particular, and republication is necessary, the responsibility rests with the Register, and he may be required to pay the cost of such republication.[17] The soundness

11 Sec. 2325, U. S. R. S., p. 136; paragraph 50 of regulations, p. 142.

12 Tomay v. Stewart, 1 L. D., 570; Erie Lode v. Cameron Lode, 10 L. D., 655; Bretell v. Swift, 17 L. D., 558.

13 Condon v. Mammoth M. Co., 15 L. D., 330.

14 W. A. Arnold, 2 L. D., 758.

15 Com'r to Central City office, May 7, 1874, 1 C. L. O., 50.

16 Dean Richmond Lode, 1 L. D., 545; and S. C., entitled Jeffords v. Hine, 11 Pac. Rep., 351.

17 J. M. Payne, 15 C. L. O., 97; Com'r to Spokane office, Oct. 30, 1895, in re Northern Light Lode.

of this decision may well be questioned. A certain degree of responsibility unquestionably rests with the claimant to examine the notice when first printed, and to see that it is complete in every particular. It is thought that the direction for the Register to publish the notice refers merely to the authority to issue the order therefor. As a matter of fact all the papers of this character are almost invariably prepared by the claimant or his attorney or agent, and the action of the Register relative thereto is purely perfunctory. It might be well to charge to the Register the cost of republication when it is satisfactorily established that the defects were the result of gross negligence or carelessness on his part.

That part of the published notice which is descriptive of the claim, and fixes its locus, is taken from the official field notes of survey if it is a surveyed claim. In preparing this part it should be remembered that the purpose of posting and publication is to give notice to the world of the pendency of an application for patent, and it should contain such particulars as will best subserve this end. It should first state the course and length of a line connecting some corner of the claim with a U. S. Mineral Monument, or with a corner of the public subdivisional surveys. If the claim is on surveyed lands, and within two miles of a section or township corner, connection should be made therewith; if on unsurveyed land or in a township the survey of which has been suspended, connection should be made with a mineral monument,[18] and if the claim is taken by legal subdivisions which can only be done under the placer law, the claim should be so described. Much uncertainty exists in the Department as to what the connection given in the published notice should be. So much so, that an examination of the cases satisfies one that there is no established rule. The regulations make certain requirements; the decisions accept almost anything else. Some of the rulings construe the regulations strictly; others go to the extreme of liberality. To illustrate, it has been held that it is not sufficient to connect the claim with a corner of the survey of an unpatented mining claim;[19]

18 Paragraph 41. Mining Circular, p. 139.

19 Emperor Wilhelm Lode, 5 L. D., 685.

that republication will be required if no connection is given in the published notice;[20] that a published notice is sufficient which connects the claim with a corner of a patented townsite, which is also the corner of a patented placer, both of which are connected in their respective surveys with a U. S. Mineral Monument;[21] that although the connection was so erroneous as to place the claim about half a mile from its true position, republication would not be required, but the entry might be referred to the Board of Equitable Adjudication for confirmation;[22] the same rule was announced where the connection in the published notice showed a slight error;[23] where there was an error of ten degrees in the course, and three chains in the length of the connecting line;[24] where the line was incorrectly published as 2,552.2 feet in length, instead of 2,252.2 feet;[25] where the course was given as N. 62 degrees E., while the true course was N. 6 degrees E.;[26] the published notice was accepted where the length of the line was given as 822.42 feet instead of 622.42 feet, the true distance, as it appeared that a line connecting a corner of the claim with the corner of another claim, was correctly stated in the notice.[27]

The claimant cannot, however, be certain that this liberal construction of the regulations will be made in his own case. He can only be certain that he will not be subjected to great delay and expense by seeing that his notice is in exact accord with the regulations.

The notice should further describe the boundaries of the claim by giving the courses and distances from one corner to the next, beginning and ending with corner No. 1; should state the exclusions, if any, and should

20 Tennessee Lode, 7 L. D., 392; Nil Desperandum Placer, 10 L. D., 198.

21 Eugene McCarthy, 14 L. D., 105. By Departmental instructions, 14 L. D., 294, this decision is held not to be a precedent.

22 Buena Vista Lode, 6 L. D., 646; Veta Grande Lode, 6 L. D. 718.

23 Alabama Quartz Mine, 14 L. D., 563.

24 Walter C. Childs, 10 L. D., 173.

25 Newport Lode, 6 L. D., 546.

26 Hoffman v. Venard, 14 L. D., 45.

27 Departmental decision of May 20, 1896, Alsa R. Lode; see, also, French Lode, 22 L. D., 675.

locate the claim by section, township and range if on surveyed land.

As to the requirement that the notices posted and published shall state where the location is recorded, giving the book and page thereof, and name adjoining claims, the cases of Parsons v. Ellis[28] and Gowdy v. Kismet Gold Mining Company[29] state the reasons for the requirement. Quoting from the case first mentioned:

"It is certainly contemplated by paragraph 29[30] that the notice posted on the claim must contain information where the record of the claim may be found. Simply referring to the record in the office of the recorder of the county, as in the case at bar, is not, in my judgment, sufficient. The book and page of the record should be given of the location upon which the official survey is made. It is not contemplated that those owning lands in the vicinity of the claim for which patent is sought should be put to the trouble and expense of searching records to ascertain the location. The applicant is the moving party, and upon him is cast the burden of showing all the data by which parties interested may readily make such examinations as will enable them to determine whether there is a conflict between the claim applied for and others in the neighborhood. The necessity for doing this with accuracy is emphasized by paragraph 36."[31]

In the second case referred to, it is said:

"The law and the regulations thereunder in regard to giving notice of application for patent of mining claims is much more elaborate than in any other class of public lands; and the reasons for this can be readily understood when it is remembered that mining claims are very often located in regions remote from settlements, where but few people are to be found at any time, and, perhaps, none reside permanently until the claims are developed, their value established, and by reason thereof the locality becomes populated with those seeking the riches of nature, or to engage

28 23 L. D., 504 (review). (S. C., 23 L. D., 69).

29 22 L. D., 624. (S. C., 24 L. D., 191; 25 L. D., 216).

30 Now paragraph 44 of the revised regulations, approved December 15, 1897, page 140.

31 Now paragraph 51 of the revised regulations, approved December 15, 1897, page 143.

in trade and traffic, mechanics and miners, all brought together simply by reason of the mines. * * * * * In such sparsely settled 'mining camps,' as well as in the older and more densely populated districts, applications for patent for mining claims are made, and it was the intention of the law and rules that by every means known, and by every device that could be suggested, *full and adequate notice should be given* to the world of the application, and that those seeking the notices, whether posted or published, might from the contents thereof locate the claim. Hence all these details required by the paragraph quoted.[32] The names of adjoining or of the nearest claims might enable a party interested to identify the claim applied for, when by nothing else in the notice he could do so. The notice should state where the record of the claim can be found, for the reason that the location may be recorded in the records of the mining district, if there be one, or in the recorder's office of the county where the claim is situated."

The notice published must not be so abbreviated as to be misleading. Neither should it be so long as to be confusing. Many of the notices published contain practically the whole description given in the official field notes. This is unnecessary, as the field notes ordinarily contain much matter not essential to a perfect notice, but which is requisite for the purpose of preparing the patent.

This notice must be published for a period of sixty days. This requires ten insertions in a weekly paper.[33]

In computing the time of publication, the first day is excluded, and when the sixtieth day of publication falls on Sunday or on a legal holiday, the next day is held to be the last day of publication.[34] The exact date when the period of publication expires is of particular importance in determining the status of adverse claims, and is considered at length elsewhere.[35]

32 Paragraph 29. Now paragraph 44 of the revised regulations, approved December 15, 1897, page 140.

33 Paragraph 50 of the mining regulations, approved December 15, 1897, page 142.

34 Miner v. Marriott, 2 L. D., 709; Bonesell v. McNider, 13 L. D., 286.

35 Waterhouse v. Scott, 13 L. D., 718; Ground Hog Lode v. Parole & Morning Star Lodes, 8 L. D., 430.

Publication and posting of notice of application for mineral patent is process which brings all adverse claimants into court, and hence the details relative thereto are examined with great care by the Land Department. The notice published should be in the regular edition of the paper, and not in a supplement; should be continuous and should not be changed from the daily to the weekly edition, or vice versa.[37]

The expense of publication must be borne by the claimant, who, with his application, as stated by regulation 50 heretofore mentioned,[38] must furnish the agreement of the publisher to hold the applicant alone responsible for the charges of publication.[39]

The Statute[40] gives the Commissioner of the General Land Office authority to fix the charges for newspaper publication in mineral cases. Under this authority a schedule of rates is fixed[41] and any charges in excess of these are considered exorbitant, under the rule. Further authority is given by the statute cited to designate any newspaper published in a land district for publication of mineral land notices, if exorbitant charges are made by the ones published nearest the land.

POSTING IN LAND OFFICE.

At the same time the Register must post a similar notice in the local land office, and the three notices—the one posted on the claim, the one published, and the one posted on the bulletin in the local land office—must cover the same period of time, i. e., the sixty days' period of publication.[42] A material defect in one or the other of these notices will necessitate republication and posting. This notice should in substance be the same as that posted on the claim and published in

37 Charles W. Cannon, 3 C. L. O., 18.

38 Mining Circular, approved December 15, 1897, page 142.

39 Paragraph 50 of the mining regulations, approved December 15, 1897, p. 142.

40 Sec. 2334, U. S. Rev. Stat., page 164.

41 Paragraph 91 of the mining regulations, approved December 15, 1897, page 164.

42 Tilden v. Intervenor M. Co., 1 L. D., 572; Great Western Lode, 5 L. D., 510.

the newspaper, and it is unnecessary to repeat here the suggestions made relative thereto.[43]

When the land claimed lies in two districts, notices of application should be posted in the offices in both districts, and the application for patent should be filed in the district where the principal workings are situated.[44]

FIVE HUNDRED DOLLARS' EXPENDITURE.

Either at the time of filing his application for patent, or at any time within the sixty days' period of publication, the claimant must file the certificate of the United States Surveyor General that not less than $500 has been expended in improvements upon the claim by the applicant or his grantors. It is the usual method for the United States Surveyor General to incorporate this certificate in the official field notes heretofore mentioned, and to indorse the same upon the plat of survey, the certificate being based upon the report as to improvements returned by the Deputy Mineral Surveyor. Should it happen, however, that at the time when the survey was made the requisite expenditure had not been made, a subsequent report by the Deputy may be made and a certificate issued based thereon. The Land Department, however, will not accept a certificate describing improvements which were made after the expiration of the sixty days' period of publication.[45]

The object in prescribing this condition as a prerequisite to entry and issuance of a patent, was twofold; first, to develop the mine sufficiently to determine its value, and, second, as an evidence of good faith on the part of the claimant. It was evidently in the minds of the legislators that a miner would scarcely expend such an amount upon land in mining improvements unless there was some hope of a return in the way of valuable mineral.

Until recently it has been the practice of the Land Department to accept a certificate showing that $500

43 See ante page 77.

44 Com'r to San Francisco, Cal., office, Nov. 12, 1875, Copp's Min. Lands, 2d Ed., 181.

45 Floyd v. Montgomery, 26 L. D., 122.

had been expended upon and for the development and benefit of a group of contiguous mining locations embraced in one application for patent,[46] but by the revised regulations[47] it is required that an expenditure equal to $500 for each location be shown.

These improvements may, however, be placed anywhere on the consolidated claim or outside of its limits, provided they are shown to have been placed there for the purpose of developing the consolidated claim as a whole.

Improvements of a permanent character made as annual expenditure under Section 2324, U. S. Rev. Stat., or, as it is commonly called by miners "assessment work," or "representation work," may be counted as part of the expenditure of $500. The deputy mineral surveyor cannot report any expenditure the evidences of which are not to be seen, and he must have an opportunity of determining whether or not the improvements tend to develop the claim. The rule cannot be better stated than it is in the case of Jupiter Mining Company v. Bodie Consolidated Mining Company.[48] Work may be done or improvements made upon one or more locations of a group of claims, contiguous or held in common, for the development of the entire group, and when so done, or made to the required amount, may be considered as a compliance with the law requiring annual expenditure, or the expenditure of $500.[49] The expenditure made must have some direct relation to the claim, or be in reasonable proximity to it,[50] and must tend "to facilitate the extraction of the metals it may contain."[51] Evidence of work having been done outside of a claim, is received with great caution, and it usually is required that a showing be made that the work was done for the improvement of that particular claim, and not for the benefit of any other claim.[52]

46 Circular March 24, 1887, 8 L. D., 505; Ferguson v. Hanson, 21 L. D., 336.

47 See paragraph 3, page 143.

48 See ante, p. 39; 11 Fed. Rep., 666.

49 St. Louis Sm. Co. v. Kemp, 104 U. S., 636.

50 McGarrity v. Byington, 12 Cal., 426; Du Prat v. James, 65 Cal., 555.

51 Gird v. California Oil Co., 60 Fed. Rep., 531.

52 Kramer v. Settle, 1 Idaho, 485.

The Land Department has held in several recent cases,[53] that an expenditure of $500 must be shown on every location of a group of claims unless a showing as last stated above, can be made.

The rule as to the requirement of five hundred dollars' worth of improvements, as stated in the revised regulations, appears to be in conflict with the decisions of the U. S. Supreme Court in the cases of St. Louis Sm. Co. v. Kemp;[54] Jackson v. Roby,[55] and Chambers v. Harrington.[56] In the decision first cited, the following language is used:

"The last position of the Court below, that the owner "of contiguous locations who seeks a patent must "present a separate application for each, and obtain a "separate survey, and prove that upon each the re-"quired work has been performed, is as untenable as "the rulings already considered."

There is no question but that the ruling quoted has a discriminating effect in favor of the corporation or the wealthy speculator, and against the prospector and actual miner who is ordinarily unable to hold more than one claim at a time, and secure title thereto. That in support of an application covering but one location, a showing of $500 must be made, while the same expenditure is sufficient to pass an application covering thirty or more locations, seems to be in violation of the spirit if not the letter of the law. There is generally no doubt as to the relation of the improvements to the development of a claim of one location only; but it is often difficult, unless taken on faith, to believe that a shaft fifty feet deep on one location tends to the development of a large number of locations for which title is asked. The patenting of several locations as one claim would appear more reasonable were they on one vein, and it is doubtful if Congress ever intended anything else, even if it is true that the law authorizes more than one location to be embraced in a claim.

It would seem, however, that the Land Department is without power to limit or render nugatory by its regu-

53 Sweeney v. N. P. R. R. Co., 20 L. D., 394; Ferguson v. Hanson, 21 L D., 336.

54 104 U. S., 636.

55 109 U. S., 440.

56 111 U. S., 350.

lations the ruling of the Court of last resort as to the expenditure required, and the matter will no doubt be fruitful of controversy before the Department until finally settled by legislation.

The improvements of whatever nature claimed, must have been made by the applicant or his grantors,[57] and the report of the deputy mineral surveyor must so state. A relocator of an abandoned claim cannot take credit for the work done or improvements made by the locator of the abandoned claim. The improvements claimed must have been made subsequent to the location under which title is held,[58] although it was held in a later case that the fact that a part of the required $500 expenditure was made on the land before its location as a mining claim, while held under the agricultural land laws, does not affect the validity of the entry.[59] It has also been held that prospect work looking for lodes may be considered as having been done for the development of a placer claim subsequently located on the same ground.[60] How such work can be considered as placer development work, is not quite clear, unless it happened that in search for lodes, placer deposits were discovered. It might be argued that if lodes had not been sought, the placer would have remained undeveloped.

A successful adverse claimant who asks for a patent, must furnish the certificate of the United States Surveyor General as to five hundred dollars' worth of improvements,[61] and an applicant who as part of his claim enters ground conveyed to him by the successful adverse claimant against him, as to that tract, stands in the place of his grantor, and must show $500 expenditure thereon.[62]

Where it appears that the ground on which are situate the discovery and improvements of an entered claim has been excluded as part of another claim, the entry will be canceled unless the entryman fur-

57 Sec. 2325, U. S. Rev. Stat., p. 136.

58 Trickey Placer, 7 L. D., 52.

59 Clark v. Taylor, 20 L. D., 455.

60 United States v. Iron Silver Mining Company, 24 Fed. Rep., 568.

61 Albert F. Harsh, 2 L. D., 706.

62 Jackson Mining Co., 3 L. D., 149.

nishes proof of the discovery of a lode on claimed ground, and that the requisite expenditure has been made on the part entered.[63] It is probable, however, that in such a case should the entryman establish by strong evidence that the improvements made by him or his grantors on excluded ground, were made for the purpose of developing, and do develop the particular lode claimed, the entry would be patented. The case would be strengthened could it be shown that the shafts, tunnels, or whatever workings they might be, were so placed because of the belief that they were on ground rightfully claimed, or that the situation thereof was that best suited for the proper working or development of the mine, or that to place them elsewhere was impossible.

Under the heading "Annual Expenditure" may be found illustrations of the character of improvements or expenditure it is contemplated may or may not be considered as made for the development of mining claims. While the cases thus distinguish, questions may arise covering matters not yet made the subject of decision, and it is well to remember that the courts with great unanimity have agreed that whatever expenditure tends to facilitate the "extraction of the metals a mining claim may contain,"[64] has some direct relation to the claim, or is made in reasonable proximity thereto, is sufficient under the law.

In the case of Remington v. Baudit, the court said, in speaking of a miner's cabin not on the claim: "If such kind of work or improvements off the claim were sufficient for the purpose of representation and patent, then the building of a house in a town or city, no matter how far away from the mine, if the miner had his meals and lodged there, might entitle him to hold his claim," etc.[65]

The requirement as to expenditure on placer claims is the same as in lode claims.[66]

When a mill site is applied for in connection with a lode claim, it is not necessary to show an expenditure of $500 upon such mill site, its use or occupancy for

63 Gustavus Hagland, 1 L. D., 593; Spur Lode, 4 L. D., 160.
64 See p. 85.
65 6 Mont., 138.
66 St. Louis Sm. Co. v. Kemp, 104 U. S., 636.

mining or milling purposes in connection with the lode claim being sufficient to entitle the claimant to ask a patent therefor.[67] Neither is it necessary to show a specific expenditure of $500 on a mill site taken under the second clause of Section 2337, U. S. Revised Statutes,[68] the proof of the existence of the mill or reduction works thereon being sufficient to support the entry without regard to the value of such work.

The papers heretofore mentioned are filed with the Register at the same time, and cover what may be called the Application for Patent. If considered sufficient by the officials they are given a number, the date of filing noted thereon and the records so noted. This action has the effect of segregating the land to the extent of preventing other appropriation thereof while this application is of record.[69] Should the local land officers deem the application insufficient they will reject it, and the claimant has the alternative of correcting the papers to agree with the requirements of the local land officers, or of appealing from their rejection to the Commissioner of the General Land Office, and if the decision on the issue raised is adverse to the applicant, a further appeal may carry the matter to the Secretary of the Interior, whose decision, in so far as the action of the Executive branch of the government is concerned, is final. A further reference will be made to this matter under the title of Protest and Hearing.

Should it happen that a mineral application be presented for lands which the records of the local land office show to be otherwise appropriated, the application will be rejected. The applicant, however, may show the prior appropriation to be invalid because the land is not of the character for which it has been appropriated.[70]

If, as not infrequently happens, a claim which has been made the subject of an application for patent has since been abandoned and relocated, the relocator before applying for patent must secure the cancellation

67 Alta Mill Site, 8 L. D., 195.

68 See page 147.

69 See Application, ante, page 67.

70 Hooper v. Ferguson, 2 L. D., 712; Cleghorn v. Bird, 4 L. D., 478.

or annulment of the first application.[71] The procedure in such a case is very simple.

A petition should be filed in the proper local land office, under oath and corroborated, setting forth in clear terms the filing of said application, the fact that for a certain year or longer time the required annual labor was not performed upon the claim applied for; that by reason of such fact the petitioner had relocated the ground; that he is desirous of obtaining a patent for his claim, and concluding with the prayer that a hearing be ordered to allow the petitioner opportunity of proving his allegations.

The hearing will be ordered in due course, and the relocator must be careful that legal service of the summons is made upon the applicant. Should it be decided upon the testimony submitted that the allegations of the relocator have been proven, the local land officers will transmit the record to the General Land Office with the recommendation that the application be canceled. Should all be found regular by that office, the application will be canceled, thus clearing the record for the reception of the second application.

MILL SITE APPLICATION.

Mill sites, under Section 2337,[72] United States Revised Statutes, may be applied for and patented either in connection with a vein or lode, or separately.

In the first class of cases the application for patent and the proof filed in support thereof should in every essential particular refer to the mill site adjunct, the claim being applied for as a whole.[73]

It has recently been decided by the Land Department that a mill site claimed under the first clause of said section may be applied for and patented alone, provided it be shown that it is owned and used or occupied in connection with a lode for mining purposes. The view held prior to this decision was that a mill site claimed in connection with a vein or lode claim could only be patented under an application including both.[74]

71 Andrew J. Gibson (review), 21 L. D., 219; Moylan C. Fox, 2 L. D., 766.

72 See page 147.

73 See paragraph 64, page 148.

74 Eclipse Mill Site, 22 L. D., 496.

An application for a mill site may be filed by a claimant not owning a lode claim in connection therewith, under the second clause of Section 2337, United States Revised Statutes. This portion of the statute contemplated the necessity of reduction works in mining communities to be erected and operated by parties not directly interested in mines, it being intended thereby to enable such persons to acquire suitable sites.[75]

A mill site claim must not exceed in area five acres, and must be paid for at the rate of five dollars per acre, the same as lode claims.[76]

Inasmuch as there are no legal subdivisions of this small area, there must be an official survey of the mill site.

A copy of the notice must be posted on the mill site as well as on the lode claim, and the notices posted and published must specify both lode and mill site and contain a description of each.[77]

The mill site must be non-contiguous to the lode, be non-mineral, and be used or occupied as prescribed by the statute.[78] It is the practice to allow applications where the mill site claim abuts on the end of the lode claim, provided it be clearly shown that no part of the vein itself is within the mill site, the presumption being, however, to the contrary.[79]

The proof as to the non-mineral character of the mill site may, when the matter is unquestioned, consist of the affidavit of two witnesses familiar with the facts. (See Form, p. 189.)[80]

The official field notes of survey should contain a statement as to the improvements which indicate use and occupancy, and this should be supplemented by affidavit of the claimant or his agent.

Use of land as a site for pumping works, for supplying water to a mining claim, has been held to be such

75 Charles Lennig, 5 L. D., 190; Hecla Cons. M. Co., 14 L. D., 11.

76 J. B. Haggin, 2 L. D., 755. See, also, Sec. 2337, page 147.

77 See paragraph 65, page 148, and Posting, page 65.

78 Gold Springs & Denver City Mill Site, 13 L. D., 175.

79 National Mining & Exploring Co., 7 C. L. O., 179.

80 See paragraph 67, page 148.

a use as will allow entry of the land as an adjunct to a lode claim under the statute.[81] Use of a mill site for storage of water necessary to the operation of the mine;[82] for depositing tailings or storing ore;[83] for storing tools;[84] a dwelling house for miners working on the lode claim;[85] a house for an office of the superintendent of the mine, a stable, a railroad side track, in connection with the lode,[86] is such use and occupancy as to warrant the allowance of entry under the law. But the use in the mine of timber growing upon the land,[87] for the benefit of another, and not for mining purposes,[88] has been held not to be such use and occupancy as would warrant the entry of land as a mill site.

While the locator of a mill site may cut the timber growing upon the land for the purpose of constructing a mill, or other accessory required in the development of the mine,[89] he may not sell said timber to other persons, and this timber cannot be sold by milling parties for personal use.[90]

AFFIDAVITS.

Section 2335, United States Revised Statutes,[91] prescribes that all affidavits required to be made under the mining laws may be sworn to before any officer authorized to administer oaths within the land district where the claim for which patent is sought is situated, and no provision was made in the Revised Statutes for verification by any one but the claimant himself. These requirements were modified by the acts of January 22, 1880,[92] and April 26, 1882.[93] The first au-

81 Sierra Grande M. Co. v. Crawford, 11 L. D., 338.
82 Gold Springs & Denver City Mill Site, 13 L. D., 175.
83 Charles Lennig, 5 L. D., 190.
84 Hartman v. Smith, 7 Mont., 19.
85 Satisfaction Extension Mill Site, 14 L. D., 173.
86 Eclipse Mill Site, 22 L. D., 496.
87 Two Sisters Lode & Mill Site, 7 L. D., 557.
88 Syndicate Mill Site, 11 L. D., 561.
89 A. B. Page, 1 L. D., 614.
90 Arthur Grabowski, 14 C. L. O., 252.
91 See page 155.
92 See page 137.
93 See page 153.

thorizes a non-resident applicant for patent, or an applicant temporarily absent from the land district, to take the steps necessary to secure patent through an agent or attorney in fact duly appointed.

A co-owner may make application for himself and his co-owners, and a corporation may apply through its agent. The latter act permits the adverse claimant, as has been noted, to authorize an agent or attorney in fact to verify his adverse claim, or he may, if residing or at the time beyond the land district, make the oath to his adverse claim before the clerk of any court of record of the United States or of the State or Territory where he may be, or before any notary public of such State or Territory. This act also authorizes any mining applicant, if residing beyond the land district, to make his affidavit of citizenship before the clerk of any court of record, or before any notary public of such State or Territory. With the exception of the affidavits mentioned by the act of April 26, 1882, all proofs in mining cases which require verification must be executed within the land district where the premises involved in the proceedings are situated.

PROTEST AND HEARING.

The preceding paragraphs contemplate that all the proceedings in the various steps to acquire title have been regular and in compliance with law. This may not, however, be the case, and opportunity is given by the law and the regulations, to those asserting the contrary, to present the matter in proper form for determination by the Land Department. The concluding clause of Section 2325, United States Revised Statutes, states, "and thereafter no objection from third parties to the issuance of patent shall be heard, except it be shown that the applicant has failed to comply with the terms of this chapter."

A party claiming an interest adverse to the applicant must protect his claim in accordance with the method prescribed by Section 2326, United States Revised Statutes. In the event of his failure to do so he cannot set up his claim in the form of a protest, and have the same adjudicated by the Land Department.[94] A pro-

94 See page 144.

test, to receive consideration, must allege a failure to comply with law in some material particular by the applicant for patent, which failure, if proven, would be sufficient to necessitate the cancellation of the application or entry. It must be under oath, and when directed against a claim on which final entry has been made must be corroborated by the affidavit of two witnesses.

The allegation by a protestant that the location of a mining claim applied for was invalid because of conflict with a prior location of the protestant is simply the allegation of an adverse claimant, which may be tried only in the manner prescribed by Section 2326, United States Revised Statutes, in a court of competent jurisdiction, and such an allegation by a protestant will be given no weight before the Land Department.[95]

Protests may be filed at any time prior to the issuance of patent, and should be filed in the local land office as a rule. If directed against an application for patent, the local land officers have jurisdiction to pass upon the same; if against an entry, the protest will be forwarded by the local land officers to the Commissioner of the General Land Office, who will take appropriate action thereon.

If a protest is deemed sufficient and raises an issue, a "hearing" will be ordered at which both parties may submit testimony; if considered as not possessing sufficient merit to justify further investigation it will be dismissed.

A protest alleging non-compliance with law on the part of an applicant for a mineral patent, must be sufficient to overcome record evidence of compliance with the law in order to warrant the ordering of a hearing.[96] In the face of a mere protest the law will be construed more liberally in favor of a claimant than in face of a contestant asserting an adverse right.[97] A protest which sets up invalidity of the location of the claim entered will not be sufficient to warrant a hearing

95 Warren Mill Site v. Copper Prince Lode, 1 L. D., 555; Bodie Tunnel & Mining Co. v. Bechtel Cons. M. Co., 1 L. D., 584; Whitman v. Haltenhoff, 19 L. D., 245; Gowdy v. Kismet G. M. Co., 22 L. D., 624.

96 Whitman v. Haltenhoff, 19 L. D., 245.

97 420 Mining Co. v. Bullion M. Co., 2 C. L. O., 5.

where the validity of said location has been established in court. An allegation of fraud must be specific.[98]

A protestant against an entry who alleges fraud on the part of the entryman should be specific as to the facts alleged to constitute the fraud.[99]

Either party has the right of appeal to the Commissioner of the General Land Office from the adverse action of the Register and Receiver.

The protestant has no right of appeal from the decision of the Commissioner to the Secretary of the Interior unless he alleges an interest in the land in controversy and that his rights were injuriously affected by the failure of the applicant to comply with the conditions prescribed by the law, the theory being that the protestant who alleges no interest is a mere amicus curiae, and that as such an appeal by him would be equivalent to an appeal by the government from its own action.[1]

The proceedings before the Land Department in such cases are governed by printed regulations entitled "The Rules of Practice."

The character of the land may be brought in issue by a protest filed against any application for patent pending under either the mineral or agricultural land laws. The "Rules of Practice" are modified for such cases by paragraphs 103 to 110 inclusive of the Mining Regulations.[2]

As a general rule, an order of the Commissioner of the General Land Office directing a hearing, is discretionary action, and an appeal will not lie therefrom,[3] but the refusal to order a hearing when it amounts to the denial of a right claimed, is an order from which an appeal will lie.[4]

98 T. M. Empty, 10 C. L. O., 102.

99 Com'r to Glenwood Springs Office, June 10, 1893, in re Lux Placer.

1 Parsons v. Ellis, 23 L. D., 69; Smuggler M. Co. v. Trueworthy Lode, 19 L. D., 356.

2 See pages 167 et seq.

3 Bailey v. Olson, 2 L. D., 40; Florida Railway & Navigation Co. v. Miller, 3 L. D., 324; Heitkamp v. Halvorson, 3 L. D., 530; James H. Murray, 6 L. D., 124; Smalley v. Pawblits, 8 L. D., 372; Reeves v. Emblen, 8 L. D., 444; Samuel J. Bogart, 9 L. D., 217.

4 Jackson v. McKeever, 3 L. D., 516; Turner v. Robinson, 3 L. D., 562; Henry C. Putnam, 5 L. D., 22; James H. Murray, 6 L. D., 124; Ulitalo v. Kline, 9 L. D., 377; Anderson v.

Frequent complaint is made that valuable mineral lands are being fraudulently taken under the agricultural land laws, by individuals, or by corporations and by States under the land grant acts, or that agricultural lands are being wrongfully appropriated under the mineral land laws. The Land Department has prescribed regulations which, if invoked by individuals desirous of protecting the public domain from spoliation, are sufficient to defeat any improper or unlawful claim.

Citizens should be mindful of the fact that the government is powerless to make a specific investigation as to the character of each tract of public land. The public domain is so vast that reliance must, in the great majority of cases, be placed upon the proofs submitted in support of each specific claim. If the proofs are regular, and no showing to the contrary is made, patent will issue based upon the record made. No application can go to patent without, under the statutes, great publicity being given to the proceedings.

The residents of a community should see that no patent is granted for lands therein which are not clearly of the character contemplated by the law under which the appropriation thereof is made. Concerted action in this direction would do much to preserve the valuable mineral lands of the United States for the miner, and would encourage the settlement and development as homes of such lands as are clearly agricultural.

FINAL PROOFS.

Upon the expiration of the period of publication the claimant may file (1) proof of continuous posting, (2) proof of publication, (3) proof of sums paid, and (4) application to purchase; and if all the evidence submitted appears to be regular, and no adverse claim or protest has been filed, final entry will be allowed upon the payment to the Receiver for the land at the rate of $5 per acre and fraction of an acre.

Amador & Sacramento Canal Co., 10 L. D., 572; Frary v. Frary, 13 L. D., 478; Cameron v. McDougal, 15 L. D., 243; Spratt v. Edwards, 15 L. D., 290; Gray v. Whitehouse, 15 L. D., 352.

PROOF OF CONTINUOUS POSTING.

Proof of continuous posting on the claim consists of an affidavit by the applicant, or his duly authorized agent, to the effect that the plat and notice posted on the claim remained continuously and conspicuously posted thereon from the —— day of ———, 189—, until and including the —— day of ———, 189—, and covering the sixty days period during which notice was published in the newspaper.

Particular care should be taken that the proper dates of posting are given in this affidavit. It will not do for the affidavit to state generally "that said plat and notice remained posted continuously during the sixty days' period of publication." The Land Department insists that the specific dates be given in all these affidavits. It is noticed that in a large number of cases submitted there is great carelessness in this particular, and in consequence the claimants are subjected to delay which might well be avoided.[5]

To bar the rights of adverse claimants, notice of the application for patent must be given for sixty days concurrently by posting of plat and notice upon the claim, by posting of notice in the local land office and by publication.[6] While the publication, if in a weekly newspaper, must cover a period of sixty-three days, it does not follow that the notice and plat must remain posted for that entire time, sixty days of concurrent notice being all that is required.[7] This affidavit need not be based upon continuous personal observation of the posting, but may properly be made by a claimant whose knowledge of the fact sworn to is derived from personal observation at various times of the plat and notice posted, and from such information relative thereto as would be accepted by a reasonably cautious man.[8] Where an entry is defective in that proper posting of plat and notice upon the claim is not shown, the claimant may be allowed to give new notice by publication, and posting upon the claim and in the local land office as required in the first in-

5 See Form, p. 186.

6 Tilden v. Intervenor M. Co., 1 L. D., 572.

7 Great Western Lode, 5 L. D., 510.

8 Bright v. Elkhorn M. Co., 9 L. D., 503; Tangerman v. Aurora Hill M. Co., id., 538.

stance, with the same rights to adverse claimants.[9] Where it was shown at a hearing after the allowance of an entry, that the plat and notice had not been posted conspicuously upon the claim, but had been hidden instead, the entry was ordered canceled without prejudice to claimant's right to file a new application and take anew the steps necessary to acquire title.[10] In another case presenting similar facts, except that entry had not been made, the applicant was required to give new notice.[11] A shaft-house is a conspicuous place upon which to post the notice and plat, especially where there are no other surface improvements.[12] And posting made inside an open shaft-house has been held satisfactory.[13] The posting may be made upon a portion of the claim excluded from the application for patent if in a conspicuous place;[14] and an entry was referred to the Board of Equitable Adjudication where the plat and notice were not posted upon the claim applied for, owing to inaccessibility and danger from snowslides, but were posted in a conspicuous place on adjoining land.[15] For the purpose of posting of notice of application a consolidation of a group of several contiguous locations, held in common and covered by one survey and application, is regarded as one claim, and only one notice and plat need be posted on the group.[16] When, however, a lode claim and a mill site are embraced in one application, a plat and notice should be posted upon each.[17] In one case this requirement was waived in view of the large amount expended in improvements upon the mill site, and the entry was patented, although the plat and notice were posted only upon the lode claim.[18] The rule in that case was subsequently modified, however, and

9 Cornell Lode, 6 L. D., 717.

10 Pratt v. Avery, 7 L. D., 554.

11 Ferguson v. Hanson, 21 L. D., 336.

12 Gowdy v. Kismet M. Co., 22 L. D., 624.

13 Louisville Lode, 1 L. D., 548.

14 Hughes v. Gilbert, 2 L. D., 756.

15 Rowena Lode, 7 L. D., 477.

16 S. F. Mackie, 5 L. D., 199; Com'r to Pueblo land office, January 12, 1897, in re Engineer Lode.

17 Silver Star Mill Site, 25 L. D., 165.

18 Bailey & Grand View M. & Sm. Co., 3 L. D., 386.

an entry was referred to the Board of Equitable Adjudication under similar circumstances.[19]

As the object of requiring notice of application to be given by posting and publication is to put those having adverse interests upon their guard, it was held that where the testimony in a contest case was conflicting as to whether or not the notice was conspicuously posted on the claim, the contest must be dismissed because the contestant was shown to have had actual notice of the pendency of the claimant's application.[20]

During the sixty days' period of publication, the notice of application must remain posted in the local land office of the district in which the claim is situated, and if during such period the boundaries of the land district are changed, the notice must be changed to the proper land office, if necessary to a compliance with this rule; otherwise new notice by publication and posting will be required.[21] Where, through the failure of the register to make and file with the record his certificate of posting, it has become impossible to show positively that the notice remained posted in the land office for the required period, the affidavits of those who were local land officers at the time such posting is supposed to have continued, to the effect that it was their custom to post such notices on ordering publication, may be accepted as satisfactory.[22] The proper evidence of posting in the land office is the certificate of the register, but if such certificate cannot be obtained, the claimant may be allowed to submit evidence upon the point.[23] Where the claim to which patent is sought lies in two land districts, the application for patent should be filed in that district in which are the principal workings, and the notice should be posted in the land office of each district.[24]

PROOF OF SUMS PAID.

The claimant at the time of making final proof and

19 New York Lode & Mill Site, 5 L. D., 513.
20 Byrne v. Slauson, 20 L. D., 43.
21 F. A. Williams, 17 L. D., 282.
22 S. H. Standart, 25 L. D., 262.
23 Mimbres M. Co., 8 L. D., 457.
24 Com'r to San Francisco office, Nov. 12, 1875.

payment should also submit an affidavit showing the moneys paid out in the prosecution of his claim. The statute requires this affidavit in order that the Land Department may see that no exorbitant charges have been made by parties within its jurisdiction. The statement should show the amount deposited for office work in the Surveyor General's office; the amount paid the Deputy Mineral Surveyor for field work; the fee for filing application for patent; the amount paid for publication, and the amount paid the Receiver for the land. The Land Department, by Section 2334, United States Revised Statutes,[25] has authority to regulate these charges with the exception of the third and fifth, and will inquire into cases where the charges appear to be excessive in these particulars.

PROOF OF POSTING IN OFFICE.

At this time the Register should also prepare and file with the papers his certificate of posting notice in the local land office for sixty days, which period must be concurrent with the period of publication.[26]

PROOF OF PUBLICATION.

This evidence should consist of the affidavit of the publisher to the effect that a notice (a copy of which is attached to said affidavit) was published in his paper from the —— day of ——, 189—, to and including the —— day of ——, 189—.[27]

PURCHASE AND ENTRY.

The claimant should also file an application to purchase,[28] and should therein specifically describe the land it is desired to enter. This may be shown in the most satisfactory way by making specific exclusions from the official survey taken as the basis of application for patent, of all portions of the claim excepted from entry. On this application to purchase the Register will make the proper indorsement, and it is then

25 See page 164.
26 Form of certificate, p. 192.
27 Form of affidavit, p. 184.
28 Form of application to purchase, p. 193.

presented to the Receiver and a tender of the purchase-money made. The Receiver will then issue his receipt,[29] and upon the presentation thereof to the Register final certificate of entry will issue,[30] and the transaction is complete. The Receiver's receipt is issued in duplicate, the duplicate being given to the entryman for his protection and as an evidence of title, and must be surrendered in order to secure the patent when issued. If said duplicate receipt has been lost, however, an affidavit of such loss is accepted by the Land Department in lieu of the surrender thereof.[31]

After the legal issuance of the Register's certificate, which evidences the completion of the entry, the equitable title to the land entered is in the entryman, the United States Government thereafter holding only the naked legal title in trust for him until the issuance of the patent.[32] This title acquired by the entryman is of sufficient dignity to confer a prima facie vested right to a patent, subject only to an examination of the record by the Commissioner of the General Land Office and Secretary of the Interior.[33] The Commissioner has authority, however, to cancel and annul an entry illegally allowed. As was said by the United States Supreme Court, "The exercise of this power is necessary "to the due administration of the Land Department. "If an investigation of the validity of such entries "were required in the courts of law before they could "be canceled the necessary delays attending the ex-"amination would greatly impair, if not destroy, the "efficiency of the Department."[34] A contrary rule has

29 Form of receipt, p. 195.

30 Form of certificate of entry, p. 195.

31 Form affidavit loss of receipt, p. 206.

32 Carroll v. Safford, 3 How., 441; Witherspoon v. Duncan, 4 Wall., 210; Hughes v. United States, 4 Wall., 232; Wirth v. Branson, 98 U. S., 118; Deffeback v. Hawke, 115 U. S., 392; Cornelius v. Kessell, 128 U. S., 456; Dahl v. Raunheim, 132 U. S., 260; Benson M. Co. v. Alta M. Co., 145 U. S., 428; Bigelow v. Chatterton 10 U. S. App., 267; Union M. Co. v. Danberg, 2 Sawy., 450; People v. Shearer, 30 Cal., 648; Deno v. Griffin, 20 Nev., 249.

33 Aurora Hill Co. v. 85 Co., 12 Sawy., 355; Hamilton v. Southern Nevada Co., 13 id., 113; Benson M. Co. v. Alta M. Co., 145 U. S., 428; Last Chance M. Co. v. Tyler M. Co., 61 Fed. Rep., 557; 15 U. S. App., 456.

34 Cornelius v. Kessell, 128 U. S., 456. See, also: Bar-

been laid down by some of the lower courts, even in some comparatively recent decisions, but even aside from the reason of the matter which is clearly with the rule enunciated by the Supreme Court, these decisions of the inferior courts are clearly contrary to the law because opposed to the decisions of the highest court of the land.[35]

Of course, to be of legal effect, the cancellation of an entry must be regular and after due notice to the entryman. An order of cancellation without allowing the claimant opportunity of showing cause why his entry should not be canceled is void.[36] If, however, the Commissioner cancels an entry, even though on insufficient grounds, on the claimant's failure to appeal to the Secretary from the order holding the entry for cancellation, the rights of the entryman are lost, as he did not take proper steps to protect them.[37]

The title of an entryman prior to the issuance of patent being purely an equitable one, a purchaser of such title takes with notice of all defects which may be found by the Land Department and cannot plead that he is an innocent purchaser as a reason against the cancellation of an illegal entry.[38]

The legal effect of a certificate of entry may not be collaterally assailed any more than can a patent, it being, as a general rule, conclusive of title.[39] In some States the receiver's receipt given the claimant at date of entry is made conclusive in actions at law, of the legal title, but this rule is not followed in the Federal

nard v. Ashley, 18 How., 43; Bell v. Hearne, 19 How., 252; Harkness v. Underhill, 1 Black, 316; Marquez v. Frisbie, 101 U. S., 473; U. S. v. Schurz, 102 U. S., 378; Steel v. St. Louis Sm. Co., 106 U. S., 447, and cases cited on p. 241, Mineral Law Digest.

35 Smith v. Ewing, 23 Fed. Rep., 741; Wilson v. Fine, 40 id., 52; Stimson v. Clark, 45 id., 760; American Montana Co. v. Hopper, 48 id., 47.

36 Risdon v. Davenport, 4 S. Dak., 555; Young v. Hansen, 64 N. W. Rep., 654; Senator Mill Site, 7 L. D., 475; Neal v. McMullen, 9 id., 522; Vanderbilt Lode, 16 id., 105; McGowan v. Alps Cons. M. Co., 23 id., 113.

37 Roberts v. Gebhart, 104 Cal., 67.

38 Sweigart v. Walker, 30 Pac. Rep., 162; R. M. Chrisinger, 4 L. D., 347; W. E. McIntyre, 6 id., 503; C A. Kibling, 7 id., 327; Murphy v. Sanford, 11 id., 123; U. S. v. Miller, 14 id., 617.

39 Hamilton v. Southern Nevada M. Co., 33 Fed. Rep., 562.

courts, as it proves only the right to a patent, the issuance of which is necessary to the vesting of the legal title in the claimant.[40]

PATENT.

In the ordinary course of business after the allowance of entry by the local land office, the papers are transmitted to the General Land Office. Here they are examined critically, and if no irregularities are discovered in the proofs made, the "entry," as it is then called, is approved, and the fee-simple deed of the government, called a "Patent," is prepared and delivered.[41]

A patent is, in its legal effect, a quit-claim deed from the United States Government to the patentee, and passes whatever title the Government has to the land described.[42]

A patent must be signed in the name of the President, either by himself or by his duly appointed Secretary, must be sealed with the seal of the General Land Office, must be countersigned by the Recorder of the Land Office and must be recorded in the records of the General Land Office. Until all these things have been done, no patent has been issued.[43] After the performance of these acts, the patentee has a right to its possession, which right may be enforced by a writ of mandamus directed against the officer having possession.[44] The matter of gaining actual possession of the patent is of no importance, however, as the moment the completed patent has been placed of record in the General Land Office, the legal title passes to the patentee.[45] The title being one of record does not require delivery of the patent, wherein the title by patent differs from one by deed.

A patent relates back to the inception of the claim upon which it is based. A long line of decisions lay down the rule that the patent relates back to the date

40 Langdon v. Sherwood, 124 U. S., 74.

41 For forms of patents see pp. 196 et seq.

42 Knight v. U. S. Land Ass'n, 142 U. S., 161.

43 McGarrahan v. New Idria M. Co., 96 U. S., 316.

44 U. S. v. Schurz, 102 U. S., 378.

45 Meader v. Norton, 11 Wall., 442; Bicknell v. Comstock, 113 U. S., 149; U. S. v. Minor, 114 id., 233.

of entry,[46] and in other cases it has been held that the patent relates to the date of location of the mining claim conveyed by the patent.[47] It is not thought that there is any real conflict between these two lines of decisions, but it would seem that the rule last mentioned is not applicable to all cases and for all purposes. For example, Section 2324, United States Revised Statutes, requires that assessment work be done every year upon a mining claim "until a patent has been issued therefor." Yet it is held that this annual expenditure need not be made after the claim has been paid for and entry allowed,[48] because after that date the entryman has a right to the patent which, when issued, relates to that date. It could not be held, however, that the performance of this annual labor could be excused because a location had been made of the claim.

Patents, in actions at law, are conclusive "of all matters of fact necessary to their issue, where the Department had jurisdiction to act upon such matters and to determine them; but if the lands patented were not at the time public property, having been previously disposed of, or no provision had been made for their sale, or other disposition, or they had been reserved from sale, the Department had no jurisdiction to transfer the lands, and their attempted conveyance by patent is inoperative and void, no matter with what seeming regularity the forms of law have been observed."[49]

A patent, regularly issued, is conclusive, in all actions, of the legal title and may be attacked only by a direct proceeding, in the name of the United States.[50]

The proviso found in the act of August 30, 1890, (26 Stat., 391) reads as follows:

"Provided, That in all patents for lands hereafter

46 Bagnell v. Broderick, 13 Pet., 436; Shepley v. Cowan, 91 U. S., 330; Heydenfeldt v. Daney M. Co., 93 id., 634; St. Louis Sm. Co. v. Kemp, 104 id., 636; Steel v. St. Louis Sm. Co., 106 id., 447; Deffeback v. Hawke, 115 id., 392.

47 Last Chance M. Co. v. Tyler M. Co., 157 U. S., 683; Eureka M. Co. v. Richmond M. Co., 4 Sawy., 302; Kahn v. Old Telegraph M. Co., 2 Utah, 174.

48 Benson M. Co. v. Alta M. Co., 145 U. S., 683.

49 Davis' Adm'r v. Weibbold, 139 U. S., 507.

50 Johnson v. Towsley, 13 Wall., 72; St. Louis Sm. Co. v. Kemp, 104 U. S., 636; Steel v. St. Louis Sm. Co., 106 id., 447; Heath v. Wallace, 138 id., 573.

taken up under any of the land laws of the United States or of any entries or on any claims validated by this act west of the 100th meridian, it shall be expressed that there is reserved from lands in said patent described a right of way thereon for ditches or canals constructed by the authority of the United States."

This provision of law was held by the Commissioner of the General Land Office to apply to patents issued for mining claims in Alaska. See his letter of September 4, 1897, to the Sitka land office in re Bald Eagle and other lodes.

ADVERSE CLAIM.

As before seen, the applicant for a mineral patent is required to give notice of his application. This notice is made a prerequisite to the end that all persons who may have interests which are in conflict with the claim of the applicant may be put on their guard and may take such steps as are necessary to a presentation of their claims and a determination thereof. Sections 2325 and 2326, United States Revised Statutes, and the Act of March 3, 1881,[51] contain the statute law relative to this subject, but the courts and the Land Department have rendered many decisions in construing and giving effect to these statutory provisions. The first subject of inquiry will be the ascertainment of the meaning of the term "adverse claim." In its broader sense it means any claim or title the existence of which is opposed to the title of the applicant for patent. In its restricted sense, however, it refers more particularly to that paper filed in the local land office, wherein is set forth, under oath, the title of the adverse claimant and the fact that the mining claim for which patent is asked is in conflict with the claim of the affiant, the document concluding with the prayer that all proceedings be stayed before the land office until the conflicting rights may be determined by a court of competent jurisdiction.[52] The "adverse," as it is commonly called, must be verified by the oath of the adverse claimant, if he is within the land district; other-

51 For these statutes and regulations of Land Department, see pp. 136, 151 and 152.

52 For form of adverse claim, see p. 189.

wise by that of a duly authorized agent.[53] If the adverse is sworn to by the adverse claimant the oath may be taken before "the clerk of any court of record of the United States or the State or Territory where the adverse claimant may then be, or before any notary public of such State or Territory," but if sworn to by an agent it would seem that the oath must be taken within the land district in which the claims are situated.[54] As a corporation can act only by an agent, an adverse claim filed on behalf of a corporation should be verified by the oath of an officer or a duly authorized agent.[55]

The fee payable on filing an adverse claim in the land office is ten dollars, for the payment of which the receiver gives a receipt.[56] This fee cannot be demanded unless the adverse claim is received and filed.[57] The adverse claim must set forth the fact that an application for patent has been filed for a described claim, that notice of such application is being given by publication, and must set forth the title of the adverse claimant to a conflicting claim, should allege his superior right to the conflict, and should be accompanied by record evidence of title to the conflicting claim and by a plat made by a United States deputy mineral surveyor, showing the boundaries and extent of the conflict between the two claims.[58] Where, however, it is impossible to secure such a plat, the conflict may be shown by an unofficial survey,[59] or by the best means obtainable.[60] While the papers mentioned are all essential parts of a valid adverse, if an adverse claim not accompanied by them is received and the filing fee accepted, the adverse claim will not be rejected if said papers are subsequently filed.[61]

53 See Sec. 2335, U. S. Rev. Stats., Sec. 1 of Act of April 26, 1882, 22 Stats., 49, and Departmental Regulations, p. 153.

54 Circular of May 9, 1882, 1 L. D., 685.

55 Hawley M. Co. v. Memnon M. Co., Sickels', 235.

56 See paragraph 97 of regulations, page 166, and Form, page 191.

57 Waterhouse v. Scott, 13 L. D., 718.

58 See Form, p. 189.

59 Hoffman v. Beecher, 31 Pac. Rep., 92.

60 Philadelphia M. Co. v. Finley, 10 C. L. O., 340; J. S. Wallace, 1 L. D., 582.

61 Departmental decision, July 22, 1892, in re Orient Lode.

To be of legal effect and operate as a stay of proceedings before the Land Department, an adverse claim must be filed during the sixty-day period of concurrent notice by publication and posting.[62] "The proceedings before the Land Department are judicial in character, and the publication of notice, as required, brings all parties into court; and if they stand by and allow the statutory time for filing adverse claims, or for bringing suit in support thereof, to elapse, their rights, so far as they might have been determined in such proceedings, * * * are lost."[63] While the publication of notice in a weekly newspaper is required to cover sixty-three days, adverse claims must, under the statute, be filed within the sixty-day period.[64]

In computing the sixty days within which an adverse claim must be filed, the first day of publication must be excluded.[65] If the posting upon the claim or in the land office is not continuous, the notice is not legal, and adverse claimants are not bound thereby.[66] If the sixtieth day of publication falls on a legal holiday an adverse claim may be filed on the following business day, according to the decisions of the Department,[67] though whether this rule would be accepted by the courts is doubtful. A misstatement in the published notice as to the date of last publication will not relieve from the necessity of filing adverse claims within the sixty-day period.[68] An adverse claim may be accepted by a local land officer on a holiday, or out of office hours, or at his home, and, if so accepted, will

62 Snow Flake Lode, 4 L. D., 30; Nettie Lode v. Texas Lode, 14 L. D., 180.

63 Kannaugh v. Quartette M. Co., 16 Colo., 341. See, also, Gwillim v. Donnellan, 115 U. S., 45; Lee v. Stahl, 9 Colo., 208, 13 Colo., 174; Hunt v. Eureka Gulch M. Co., 14 Colo., 451; Wight v. Dubois, 21 Fed. Rep., 693; Wight v. Tabor, 2 L. D., 738; Pettit v. Buffalo M. Co., 9 L. D., 563.

64 Miner v. Marriott, 2 L. D., 709; Ledger Lode, 16 L. D., 101.

65 Bonesell v. McNider, 13 L. D., 286; Waterhouse v. Scott, 13 L. D., 718.

66 Tilden v. Intervenor M. Co., 1 L. D., 572.

67 Ground Hog Lode v. Parole & Morning Star Lodes, 8 L. D., 430.

68 Nettie Lode v. Texas Lode, 14 L. D., 180.

be treated as though filed in the land office during business hours.[69]

Within thirty days from the time an adverse claim is filed in the land office, suit must be commenced by the adverse claimant against the applicant, in a court of competent jurisdiction, to determine the rights of the parties.[70] A failure to commence such suit within this time is a conclusive waiver of the adverse claim,[71] and a suit brought after the expiration of that period will be dismissed by the court if a motion for dismissal is made at the proper time, in the trial court.[72]

Where an adverse claim was rejected by the local land office and the matter was carried on appeal to the Commissioner, and thence to the Secretary, and in the meantime no suit was brought, it was held that failure to begin the suit was a waiver of the adverse claimant's rights.[73] This decision appears to be unfounded in reason, however, for the adverse claim not having been accepted by the Land Department, there was no basis for the commencement of a suit under the provisions of Section 2326, United States Revised Statutes.

What constitutes the commencement of a suit depends upon the law of the State wherein the suit is brought.[74]

While the section of the statute above referred to requires the adverse claimant to prosecute his suit "with reasonable diligence to final judgment," the question of whether or not reasonable diligence has been shown is one solely for the determination of the court in which the suit is pending, and is not to be inquired into by the Land Department.[75]

69 Sayer v. Hoosac M. Co., 6 C. L. O., 73; Jenny Lind M. Co. v. Eureka M. Co., Sickels', 223-231.

70 Sec. 2326, U. S. Rev. Stat., page 151.

71 Bodie Co. v. Bechtel Co., 1 L. D., 584; Great Eastern Co. v. Esmeralda Co., 2 L. D., 704; Branagan v. Dulaney, 2 L. D., 744.

72 Marshall S. M. Co. v. Kirtley, 12 Colo., 410.

73 Scott v. Maloney, 22 L. D., 274.

74 Richmond M. Co. v. Rose, 114 U. S., 576; Mars v. Oro Fino M. Co., 65 N. W. Rep., 19; De Garcia v. Eaton, 22 L. D., 16; Catron v. Lewisohn, 23 L. D., 20.

75 Richmond M. Co. v. Rose, 114 U. S., 576; J. S. Wallace, 1 L. D., 582; De Garcia v. Eaton, 22 L. D., 16.

The reasonable rule would seem to be that a suit on an adverse claim, brought by one out of possession, should be a suit at law in the nature of a suit of ejectment; but if brought by an adverse claimant in possession, the suit should be brought as an action in equity to quiet title.[76] In the former case, the parties have a right to a jury trial; in the latter, a jury trial cannot be demanded as a matter of right.[77] In the State of Colorado, however, all suits based on adverse claims are in the nature of suits of ejectment, regardless of whether or not the plaintiff is in possession.[78] The Act of March 3, 1881,[79] does not render a trial by jury necessary in a suit based upon an adverse claim, if the action is brought as a suit in equity.[80]

A suit based on an adverse claim should be directed to the determination of whether or not either party thereto is entitled to a patent for the land in dispute,[81] hence, a mere failure on the part of the plaintiff to prove title in himself does not relieve the defendant of the burden of proving his title,[82] and if neither party to the suit shows in himself the right to a patent, it should be so adjudged under the provisions of the Act of March 3, 1881, supra.[83] The mere entry of judgment in favor of a party to such a suit does not, however, compel the Land Department to grant him a patent, for he is still required to show to the satisfaction of the Department a full compliance with law.[84] The successful adverse claimant, before he

76 Wolverton v. Nichols, 119 U. S., 485; Hammer v. Garfield M. Co., 130 U. S., 291; Houtz v. Gisborn, 1 Utah, 173.

77 Doe v. Waterloo M. Co., 43 Fed. Rep., 219; Perego v. Dodge, 163 U. S., 160.

78 Becker v. Pugh, 9 Colo., 589, 17 Colo., 243.

79 See page 152.

80 Perego v. Dodge, 163 U. S., 160.

81 Jackson v. Roby, 109 U. S., 440; Wolverton v. Nichols, 119 U. S., 485; Rosenthal v. Ives, 2 Idaho, 244; Lee Doon v. Tesh, 68 Cal., 43; Seymour v. Fisher, 16 Colo., 188; Waterloo M. Co. v. Doe, 56 Fed. Rep., 685.

82 Hammer v. Garfield M. Co., 130 U. S., 291; Gwillim v. Donnellan, 115 U. S., 45.

83 Jackson v. Roby, 109 U. S., 440; Becker v. Pugh, 17 Colo., 243.

84 Perego v. Dodge, 163 U. S., 160, citing approvingly, Alice Placer, 4 L. D., 314.

will be allowed to make entry of the land, must file in the land office (a) a certified copy of the judgment roll, (b) a plat and field notes approved by the United States Surveyor-General, describing the land which he seeks to enter, and (c) a certificate by the surveyor-general showing an expenditure of $500 in labor and improvements upon the land, as in other cases.[85] It may be here remarked that the adverse claimant who secures a judgment delays making entry at the risk of losing his claim through relocation by third persons, should he fail to perform the required annual labor thereon.[86]

After the filing of an adverse claim and until the suit based thereon is finally determined, or the adverse claim waived, the Land Department is without jurisdiction over the land involved.[87] The applicant for patent may, if he so desires, temporarily relinquish from his application so much of his claim as is concerned in the adverse proceedings, and secure a patent for the remainder thereof, continuing litigation for that part in conflict.[88]

It is not every claim or title which may properly form the basis for an adverse claim and suit under the provisions of Sections 2325 and 2326, United States Revised Statutes, and a brief statement of what are, and what are not properly the bases of adverse claims, will not be amiss.

A tenant in common of a mining claim, whose name has been omitted from the application for a patent, is not obliged to protect his rights under these sections, but, after the issuance of patent to his co-tenant should proceed in equity to have the patentee declared a trustee under the patent for his use and benefit,[89] or to compel a conveyance by the patentee. The right to

85 Albert F. Harsh, 2 L. D., 706.

86 Steel v. Gold Lead M. Co., 18 Nev., 80; Com'r to Leadville office, Feb. 24, 1896, in re Kennedy v. Johnston.

87 Richmond M. Co. v. Rose, 114 U. S., 576; St. Louis Sm. Co. v. Kemp, 104 U. S., 636; Clipper M. Co., 22 L. D., 527.

88 Branagan v. Dulaney, 2 L. D., 744. See, also, Last Chance M. Co. v. Tyler M. Co., 157 U. S., 683.

89 Turner v. Sawyer, 150 U. S., 578; Brundy v. Mayfield, 15 Mont., 201; Hunt v. Patchin, 35 Fed. Rep., 816; Thomas v. Elling, 25 L. D., 495 (overruling Grampian Lode, 1 L. D., 544; Lucy B. Hussey Lode, 5 L. D., 93; Monitor Lode, 18 L. D., 358). Contra Mattingly v. Lewisohn, 8 Mont., 259.

follow a lode on its dip outside of the side lines of the claim, is not the proper subject of an adverse claim;[90] nor is an easement, such as a right of way for a flume claimed under Section 2339, United States Revised Statutes;[91] nor an alleged equitable right in the claim applied for;[92] nor a claim under the agricultural land laws;[93] nor is the owner of a known lode obliged to adverse an application for a placer claim covering the ground, as the lode is excepted by law from the placer patent.[94]

On the other hand, it has been held that a claimant under an unconfirmed Mexican grant must protect his rights by proceedings under said Sections 2325 and 2326, United States Revised Statutes;[95] and that a dower interest in a mining claim must be so protected;[96] and so of a mill site claim;[97] and of the title of a town lot owner, even though the townsite has been patented.[98] Relative to this last statement, it should be said in explanation, that under the townsite laws, known mines are excepted from the operation of a townsite entry and patent. (Sections 2386 and 2392, United States Revised Statutes.) Where it is alleged by a mine owner that his claim was a known mine at date of the townsite entry, he is required to submit testimony showing this, with notice to the townsite authorities, and it is not until he has made a prima facie showing that his application for patent will be received by the Land Department.

A tunnel claimant is not required to file an adverse claim unless he has discovered in his tunnel a lode which would conflict with the claim applied for.[99]

90 Chollar Potosi M. Co. v. Julia M. Co., Sickels', 254.

91 Rockwell v. Graham, 9 Colo., 36.

92 Doherty v. Morris, 11 Colo., 12.

93 Powell v. Ferguson, 23 L. D., 173. Contra, Anderson v. Amador Co., 10 L. D., 572.

94 Noyes v. Mantle, 127 U. S., 348.

95 McGarrahan v. New Idria M. Co., 3 L. D., 422.

96 Black v. Elkhorn M. Co., 49 Fed. Rep., 549.

97 Warren Mill Site v. Copper Prince Lode, 1 L. D., 555; Shafer v. Constans, 3 Mont., 369.

98 Talbott v. King, 6 Mont., 76; Thomas Starr, 2 L. D., 759.

99 Enterprise M. Co. v. Rico-Aspen M. Co., 167 U. S., 108.

PATENTS FOR PLACER CLAIMS.

In most particulars applications for patent for placer claims are similar to applications for lode claims.

If the placer has been located and is claimed by legal subdivisions, no survey is necessary, and the application, instead of a reference to official field notes and plat of survey, should contain a description of the land applied for by section, township and range.

If the location is upon unsurveyed lands, or upon surveyed lands, and does not conform to the description thereof, an official survey by metes and bounds is required. Neither is there any difference in the proof required as to title, and the details relative to posting and publication with proof thereof are identical with those required as to lode claims.

Of course, if the placer claim is taken by legal subdivisions, no survey need be made as a preliminary to filing application for patent. In view of this a circular was issued by the General Land Office under date of September 22, 1882, requiring that a deputy mineral surveyor must report on every placer claim, with reference to the character of the land, improvements, etc. By the decision of the Secretary in the case of Rosina T. Gerhauser,[1] however, it was held that such reports should not be required where the placers are taken by legal subdivision, thus allowing the claimant to make the proof of expenditure. This decision would seem to be in disregard of Sections 2325 and 2329, United States Revised Statutes,[2] the first of which requires, where application is made for a patent to a lode claim, "That the claimant at the time of filing this application, or at any time thereafter, within the sixty days of publication, shall file with the register a certificate of the United States Surveyor-General that five hundred dollars' worth of labor has been expended or improvements made upon the claim by himself or grantors." Section 2329 provides that "Claims usually called 'placers,' * * * shall be subject to entry and patent, under like circumstances and conditions, and upon similar proceedings as are provided for vein or lode claims," etc. Clearly, under those sections of the statute the only legal evidence of com-

1 7 L. D., 390.

2 See pp. 132 and 136.

pliance with law in the matter of expenditure is the certificate of the surveyor-general.

Under the existing rule the affidavits of two or more persons should be furnished showing in detail the character, extent, position and value of improvements made upon the claim by the applicant or his grantors, and the date when made.

As stated on page 37, an individual may embrace in one placer location not more than twenty acres, while an association of individuals may locate in one claim twenty acres for every member of the association, provided that no location shall cover more than one hundred and sixty acres.[3] Any number of contiguous locations, owned in common, may be embraced in one application for patent, but under the present regulations of the Department,[4] if more than one location is included in an application for patent a showing of five hundred dollars' expenditure for each location must be made. From this it follows that if an individual locates or acquires eight contiguous locations of twenty acres each, he must show an expenditure of four thousand dollars; while, if one hundred sixty acres are located by an association of individuals but five hundred dollars need be expended in order to obtain a patent. From this it is seen that the cheaper plan for claimants is to locate jointly. It may be here remarked that this rule also governs in the matter of annual "assessment" work, i. e., if one hundred sixty acres are located as eight separate claims of twenty acres each, an annual expenditure upon or for the benefit[5] of every location is required, viz., eight hundred dollars; while if one hundred sixty acres are located by an association as one claim, even though title may afterward be vested in one person, but one hundred dollars need be expended annually on the claim. The same rule also applies as to the showing required as to discovery of mineral, i. e., one discovery must be shown upon every location, whether it contains twenty acres (or less) or one hundred sixty acres.[6]

3 Secs. 2330 and 2331, p. 132.

4 Paragraph 53, p. 143.

5 Chambers v. Harrington, 111 U. S., 350.

6 Union Oil Co., 25 L. D., 351. See, also, paragraph 25, Regulations, p. 133.

Veins or lodes are frequently known to exist within the boundaries of placer claims. In such case if the placer claimant is in possession of the vein or lode so included, he may embrace the same in his application,[7] which, with the posted and published notices, must in detail refer to and describe such vein or lode. The vein or lode with surface ground to the extent of twenty-five feet on each side thereof must be shown by an official survey, which must be filed as part of the application for patent. The application for patent may be modified by adding a clause practically as follows: * * * "and for the Blank Lode mining claim embraced therein, consisting of 1,500 linear feet of such Blank Lode, bearing gold, together with 25 feet of surface ground on each side thereof, as shown by the official plat and field notes of survey No. ——, attached to and made a part hereof. Said Blank Lode was discovered * * * as will more fully appear by reference to the abstract of title hereinbefore mentioned as part of this application for patent."

If the placer is claimed by legal subdivisions it may be so described in the application with the additional claim for the vein or lode above noted; if the placer is taken by metes and bounds, both placer and lode of course will be embraced in one survey, and the application may state that it is "for the * * * placer embracing the Blank Lode, as will more fully appear by a reference to the official plat and field notes."

If everything proceeds regularly, and no adverse interests are asserted, entry may be made upon payment of $2.50 per acre for the area of the placer ground and $5 per acre for the area shown by the survey of the lode claim.

The purchase price of placer land is $2.50 per acre;[8] of lode claims and mill sites, $5 per acre.[9] If a number of contiguous locations are embraced in one claim, the areas of the separate locations are added together, and the fraction of an acre, if any, is charged for as an acre.

If the applicant for a placer patent fails to include

7 Sec. 2333, U. S. Rev. Stats., p. 145.

8 Sec. 2333, supra.

9 Sec. 2324, U. S. Rev. Stats., p. 124, and Sec. 2337, U. S. Rev. Stats., p. 147.

therein any known lodes which may be within the exterior boundaries of his claim, the statute (Section 2333, United States Revised Statutes) provides that such failure "shall be construed as a conclusive declaration that the claimant of a placer claim has no right of possession of the vein or lode claim." It is further provided that a patent issued on a placer claim shall be held to convey all veins or lodes not known to exist at date of the placer application.

This provision of the law has frequently been before the courts and a very uniform construction has been given. It will be observed that, where the applicant for a placer patent did not specifically apply for an included lode, known to exist at the date of such application, he is estopped from claiming such lode under his placer patent.[10] To be excepted from a placer patent a lode need not have been located before the date of the application for placer patent. "It is enough that it be known, and in this respect, to come within the intent of the statute, it must either have been known to the applicant for the placer patent or known to the community generally, or else disclosed by workings and obvious to any one making a reasonable and fair inspection of the premises."[11]

A lode within the limits of a patented placer, to be excepted from the placer patent, must have been known at date of application for said patent. Mere belief, not based on any discoveries in the placer or any tracings of a vein or lode adjacent thereto, but on the theory that a lode of a horizontal position, discovered elsewhere in the district might underlie the placer, is insufficient.[12] It has been held, further that to be excepted from the operation of a placer patent, a vein must possess qualities not required to render it subject to location under Section 2320, United States Revised Statutes, i. e., it must have been known at

10 Noyes v. Mantle, 127 U. S., 348; Dahl v. Raunheim, 132 U. S., 260; Sullivan v. Iron Silver M. Co., 109 U. S., 550; Reynolds v. Iron Silver M. Co., 116 U. S., 687; Clary v. Hazlitt, 67 Cal., 286; Railroad Lode v. Noyes Placer, 9 L. D., 26; South Star Lode, 20 L. D., 204.

11 Iron Silver M. Co. v. Mike and Starr M. Co., 143 U. S., 394. See, also, Sullivan v. Iron Silver M. Co., 143 U. S., 431, reversing 16 Fed. Rep., 829.

12 Iron Silver M. Co. v. Reynolds, 124 U. S., 374; S. C., 116 U. S., 687; U. S. v. Iron Silver M. Co., 128 U. S., 673.

date of the placer application, to be sufficiently valuable to be profitably worked.[13] This view would seem to be rather extreme, but it must be borne in mind that the patent issued by the government to the placer claimant carries with it every presumption of regularity. In the face of an intervening adverse claim, an applicant for a placer patent will not be permitted to so amend his application as to embrace a lode which was known at date of filing such application.[14]

If it be shown to the satisfaction of the Land Department, either by judicial proceedings or by testimony submitted with notice to the placer claimant, that a lode lying within the limits of a patented placer was known at date of application for the placer patent, the Land Office will issue a patent for such lode.[15] Where it is shown by the claimant of a lode that he has acquired title under the placer patent, he may be allowed to prove by ex parte affidavits the known existence of the lode at date of the placer application. This fact must be clearly shown, however, and will not be assumed from the fact that a lode claim was located on the land prior to such application.[16] Under the rule laid down by the United States Supreme Court, in the case of Noyes v. Mantle,[17] where the present existence of a lode within a patented placer claim is proven, proof of the fact that it was located prior to filing of the application for placer patent, is sufficient evidence of its known existence at that time, the court using the following language: "Where a location of a vein or lode has been made under the law, and its boundaries have been specifically marked on the surfaces, so as to be readily traced, and notice of the location is recorded in the usual books of record within the district, we think it may safely be said that the vein or lode is known to exist, although personal knowledge of the fact may not be

13 Montana Central Ry. Co. v. Migeon, 68 Fed. Rep., 811.

14 Aurora Lode v. Bulger Hill and Nugget Gulch Placer, 23 L. D., 95.

15 South Star Lode, 20 L. D., 204. See, however, Iron Silver M. Co. v. Campbell, 135 U. S., 286, which appears to lay down a contrary rule.

16 Valley Lode, 22 L. D., 713.

17 127 U. S., 348.

possessed by the applicant for a patent of a placer claim."

It may be remarked in passing that the rule laid down in the case of the South Star Lode, supra, is applied by the Department to cases where a lode within a patented townsite is alleged to have been known at date of entry of the townsite, as Sections 2386 and 2392, relative to townsites exclude veins on lodes of mineral-bearing rock and valid mining claims or possessions from the operation of a townsite patent.[18]

18 Pacific Slope Lode, 25 L. D., 518, and Com'r to Denver office, Nov. 16, 1895, in re Antediluvian Lode v. Central City.

PART II.

UNITED STATES MINING LAWS, AND REGULATIONS THEREUNDER,

RELATIVE TO THE RESERVATION, EXPLORATION, LOCATION, POSSESSION, PURCHASE, AND PATENTING OF THE MINERAL LANDS IN THE PUBLIC DOMAIN.

DEPARTMENT OF THE INTERIOR,
GENERAL LAND OFFICE.

MINERAL LANDS OPEN TO EXPLORATION, OCCUPATION, AND PURCHASE.

Sec. 2318, R. S. In all cases lands valuable for minerals shall be reserved from sale, except as otherwise expressly directed by law.

Sec. 2319, R. S. All valuable mineral deposits in lands belonging to the United States, both surveyed and unsurveyed, are hereby declared to be free and open to exploration and purchase, and the lands in which they are found to occupation and purchase, by citizens of the United States and those who have declared their

intention to become such, under regulations prescribed by law, and according to the local customs or rules of miners in the several mining districts, so far as the same are applicable and not inconsistent with the laws of the United States.

NATURE AND EXTENT OF MINING CLAIMS.

1. Mining claims are of two distinct classes: Lode claims and placers.

LODE CLAIMS.

Sec. 2320, R. S. Mining claims upon veins or lodes of quartz or other rock in place bearing gold, silver, cinnabar, lead, tin, copper, or other valuable deposits, heretofore located, shall be governed as to length along the vein or lode by the customs, regulations, and laws in force at the date of their location. A mining claim located after the tenth day of May, eighteen hundred and seventy-two, whether located by one or more persons, may equal, but shall not exceed, one thousand five hundred feet in length along the vein or lode; but no location of a mining claim shall be made until the discovery of the vein or lode within the limits of the claim located. No claim shall extend more than three hundred feet on each side of the middle of the vein at the surface, nor shall any claim be limited by any mining regulation to less than twenty-five feet on each side of the middle of the vein at the surface, except where adverse rights existing on the tenth day of May, eighteen hundred and seventy-two, render such limitation necessary. The end lines of each claim shall be parallel to each other.

Sec. 2322, R. S. The locators of all mining locations heretofore made or which shall hereafter be made, on any mineral vein, lode, or ledge, situated on the public domain, their heirs and assigns, where no adverse claim exists on the tenth day of May, eighteen hundred and seventy-two, so long as they comply with the laws of the United States, and with State, Territorial, and local regulations not in conflict with the laws of

the United States governing their possessory title, shall have the exclusive right of possession and enjoyment of all the surface included within the lines of their locations, and of all veins, lodes, and ledges throughout their entire depth, the top or apex of which lies inside of such surface lines extended downward vertically, although such veins, lodes, or ledges may so far depart from a perpendicular in their course downward as to extend outside the vertical side lines of such surface locations. But their right of possession to such outside parts of such veins or ledges shall be confined to such portions thereof as lie between vertical planes drawn downward as above described, through the end lines of their locations, so continued in their own direction that such planes will intersect such exterior parts of such veins or ledges. And nothing in this section shall authorize the locator or possessor of a vein or lode which extends in its downward course beyond the vertical lines of his claim to enter upon the surface of a claim owned or possessed by another.

Sec. 2336, R. S. Where two or more veins intersect or cross each other, priority of title shall govern, and such prior location shall be entitled to all ore or mineral contained within the space of intersection; but the subsequent location shall have the right of way through the space of intersection for the purposes of the convenient working of the mine. And where two or more veins unite, the oldest or prior location shall take the vein below the point of union, including all the space of intersection.

CLAIMS LOCATED OR PATENTED PRIOR TO MAY 10, 1872.

2. The status of lode claims located or patented previous to the 10th day of May, 1872, is not changed with regard to their extent along the lode or width of surface; but the claim is enlarged by Sections 2322 and 2328, by investing the locator, his heirs or assigns, with the right to follow, upon the conditions stated therein, all veins, lodes, or ledges, the top or apex of which lies inside of the surface lines of his claim.

3. It is to be distinctly understood, however, that the law limits the possessory right to veins, lodes, or ledges, other than the one named in the original location, to such as were not adversely claimed on May 10, 1872, and that where such other vein or ledge was so adversely claimed at that date the right of the party so adversely claiming is in no way impaired by the provisions of the Revised Statutes.

CLAIMS LOCATED SUBSEQUENTLY TO MAY 10, 1872.

4. From and after the 10th May, 1872, any person who is a citizen of the United States, or who has declared his intention to become a citizen, may locate, record, and hold a mining claim of fifteen hundred linear feet along the course of any mineral vein or lode subject to location; or an association of persons, severally qualified as above, may make joint location of such claim of fifteen hundred feet, but in no event can a location of a vein or lode made subsequent to May 10, 1872, exceed fifteen hundred feet along the course thereof, whatever may be the number of persons composing the association.

5. With regard to the extent of surface ground adjoining a vein or lode, and claimed for the convenient working thereof, the Revised Statutes provide that the lateral extent of locations of veins or lodes made after May 10, 1872, shall in no case exceed three hundred feet on each side of the middle of the vein at the surface, and that no such surface rights shall be limited by any mining regulations to less than twenty-five feet on each side of the middle of the vein at the surface, except where adverse rights existing on the 10th May, 1872, may render such limitation necessary; the end lines of such claims to be in all cases parallel to each other. Said lateral measurements can not extend beyond three hundred feet on either side of the middle of the vein at the surface, or such distance as is allowed by local laws. For example: 400 feet can not be taken on one side and 200 feet on the other. If, however, 300 feet on each side are allowed, and by reason of prior claims but 100 feet can be taken on one side, the locator will not be restricted to less than 300 feet on the other side; and when the lo-

cator does not determine by exploration where the middle of the vein at the surface is, his discovery shaft must be assumed to mark such point.

6. By the foregoing it will be perceived that no lode claim located after the 10th May, 1872, can exceed a parallelogram fifteen hundred feet in length by six hundred feet in width, but whether surface ground of that width can be taken depends upon the local regulations or State or Territorial laws in force in the several mining districts; and that no such local regulations or State or Territorial laws shall limit a vein or lode claim to less than fifteen hundred feet along the course thereof, whether the location is made by one or more persons, nor can surface rights be limited to less than fifty feet in width unless adverse claims existing on the 10th day of May, 1872, render such lateral limitation necessary.

7. The rights granted to locators under Section 2322, Revised Statutes, are restricted to such locations on veins, lodes, or ledges as may be "situated on the public domain." In applications for lode claims where the survey conflicts with the survey or location lines of a prior valid lode claim and the ground within the conflicting surveys is excluded, the applicant not only has no right to the excluded ground, but he has no right to that portion of any vein or lode the top or apex of which lies within such excluded ground, unless his location was prior to May 10, 1872. His right to the lode claimed terminates where the lode, in its onward course or strike, intersects the exterior boundary of such excluded ground and passes within it. The end line of his survey should not, therefore, be established beyond such intersection.

8. Where, however, the lode claim for which survey is being made was located prior to the conflicting claim, and such conflict is to be excluded, in order to include all ground not so excluded the end line of the survey may be established within the conflicting lode claim, but the line must be so run as not to extend any farther into such conflicting claim than may be necessary to make such end line parallel to the other end line and at the same time embrace the ground so held and claimed. The useless practice in such cases of extending both the side lines of a survey into the conflicting claim, and establishing an end

line wholly within it, beyond a point necessary under the rule just stated, will be discontinued.

DESCRIPTION OF CLAIM AND ACTS NECESSARY IN ORDER TO HOLD THE SAME—LOCAL RULES AND REGULATIONS.

Sec. 2324, R. S. The miners of each mining district may make regulations not in conflict with the laws of the United States, or with the laws of the State or Territory in which the district is situated, governing the location, manner of recording, amount of work necessary to hold possession of a mining claim, subject to the following requirements: The location must be distinctly marked on the ground so that its boundaries can be readily traced. All records of mining claims hereafter made shall contain the name or names of the locators, the date of the location, and such a description of the claim or claims located by reference to some natural object or permanent monument as will identify the claim. On each claim located after the tenth day of May, eighteen hundred and seventy-two, and until a patent has been issued therefor, not less than one hundred dollars' worth of labor shall be performed or improvements made during each year. On all claims located prior to the tenth day of May, eighteen hundred and seventy-two, ten dollars' worth of labor shall be performed or improvements made by the tenth day of June, eighteen hundred and seventy-four, and each year thereafter, for each one hundred feet in length along the vein until a patent has been issued therefor; but where such claims are held in common, such expenditure may be made upon any one claim; and upon a failure to comply with these conditions, the claim or mine upon which such failure occurred shall be open to relocation in the same manner as if no location of the same had ever been made, provided that the original locators, their heirs, assigns, or legal representatives, have not resumed work upon the claim after failure and before such location. Upon the failure of any one of several co-owners to contribute his proportion of the ex-

penditures required hereby, the co-owners who have performed the labor or made the improvements may, at the expiration of the year, give such delinquent co-owner personal notice in writing or notice by publication in the newspaper published nearest the claim, for at least once a week for ninety days, and if at the expiration of ninety days after such notice in writing or by publication such delinquent should fail or refuse to contribute his proportion of the expenditure required by this section, his interest in the claim shall become the property of his co-owners who have made the required expenditures.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the provisions of the fifth section of the act entitled "An act to promote the development of the mining resources of the United States," passed May tenth, eighteen hundred and seventy-two, which requires expenditures of labor and improvements on claims located prior to the passage of said act, are hereby so amended that the time for the first annual expenditure on claims located prior to the passage of said act shall be extended to the first day of January, eighteen hundred and seventy-five. (Act June 6, 1874, 18 Stat., 61.)

That section twenty-three hundred and twenty-four of the Revised Statutes of the United States be amended by adding the following words: "Provided, That the period within which the work required to be done annually on all unpatented mineral claims shall commence on the first day of January succeeding the date of location of such claim, and this section shall apply to all claims located since the tenth day of May, anno Domini eighteen hundred and seventy-two." (Act January 22, 1880, 21 Stat., 61.)

Sec. 2327, R. S. The description of vein or lode claims, upon surveyed lands, shall designate the location of the claim with reference to the lines of the public surveys, but need not conform therewith; but where a patent shall be issued for claims upon unsurveyed lands, the surveyor-general, in extending the surveys, shall adjust the same to the boundaries of such patented claim, according to the plat or description there-

of, but so as in no case to interfere with or change the location of any such patented claim.

REGULATIONS.

9. Locators can not exercise too much care in defining their locations at the outset, inasmuch as the law requires that all records of mining locations made subsequent to May 10, 1872, shall contain the name or names of the locators, the date of the location, and such a description of the claim or claims located, by reference to some natural object or permanent monument, as will identify the claim.

10. No lode claim shall be located until after the discovery of a vein or lode within the limits of the claim, the object of which provision is evidently to prevent the appropriation of presumed mineral ground for speculative purposes to the exclusion of bona fide prospectors, before sufficient work has been done to determine whether a vein or lode really exists.

11. The claimant should, therefore, prior to locating his claim, unless the vein can be traced upon the surface, sink a shaft, or run a tunnel or drift, to a sufficient depth therein to discover and develop a mineral-bearing vein, lode, or crevice; should determine, if possible, the general course of such vein in either direction from the point of discovery, by which direction he will be governed in marking the boundaries of his claim on the surface. His location notice should give the course and distance as nearly as practicable from the discovery shaft on the claim to some permanent, well-known points or objects, such, for instance, as stone monuments, blazed trees, the confluence of streams, point of intersection of well-known gulches, ravines, or roads, prominent buttes, hills, etc., which may be in the immediate vicinity, and which will serve to perpetuate and fix the locus of the claim and render it susceptible of identification from the description thereof given in the record of locations in the district, and should be duly recorded.

12. In addition to the foregoing data, the claimant should state the names of adjoining claims, or, if none adjoin, the relative positions of the nearest claims; should drive a post or erect a monument of stones

at each corner of his surface ground, and at the point of discovery or discovery shaft should fix a post, stake, or board, upon which should be designated the name of the lode, the name or names of the locators, the number of feet claimed, and in which direction from the point of discovery; it being essential that the location notice filed for record, in addition to the foregoing description, should state whether the entire claim of fifteen hundred feet is taken on one side of the point of discovery, or whether it is partly upon one and partly upon the other side thereof, and in the latter case, how many feet are claimed upon each side of such discovery point.

13. The location notice must be filed for record in all respects as required by the State or Territorial laws and local rules and regulations, if there be any.

14. In order to hold the possessory title to a mining claim located prior to May 10, 1872, and for which a patent has not been issued, the law requires that ten dollars shall be expended annually in labor or improvements on each claim of one hundred feet on the course of the vein or lode until a patent shall have been issued therefor; but where a number of such claims are held in common upon the same vein or lode, the aggregate expenditure that would be necessary to hold all the claims, at the rate of ten dollars per hundred feet, may be made upon any one claim. The first annual expenditure upon claims of this class should have been performed subsequent to May 10, 1872, and prior to January 1, 1875. From and after January 1, 1875, the required amount must be expended annually until patent issues.

15. In order to hold the possessory right to a location made since May 10, 1872, not less than one hundred dollars' worth of labor must be performed or improvements made thereon annually until entry shall have been made. Under the provisions of the act of Congress approved January 22, 1880, the first annual expenditure becomes due and must be performed during the calendar year succeeding that in which the location was made. Expenditure made or labor performed prior to the first day of January succeeding the date of location will not be considered as a part of or applied upon the first annual expenditure required by law.

16. Failure to make the expenditure or perform the

labor required upon a location made before or since May 10, 1872, will subject a claim to relocation, unless the original locator, his heirs, assigns, or legal representatives have resumed work after such failure and before relocation.

17. Annual expenditure is not required subsequent to entry, the date of issuing the patent certificate being the date contemplated by statute.

(Requirement of proof of expenditure for the year 1894 suspended except as to South Dakota. Act of Congress approved July 18, 1894 (28 Stat. L., 114).

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the provisions of section numbered twenty-three hundred and twenty-four of the Revised Statutes of the United States, which require that on each claim located after the tenth day of May, eighteen hundred and seventy-two, and until patent has been issued therefor, not less than one hundred dollars' worth of labor shall be performed or improvements made during each year, be suspended for the year eighteen hundred and ninety-four, so that no mining claim which has been regularly located and recorded as required by the local laws and mining regulations shall be subject to forfeiture for nonperformance of the annual assessment for the year eighteen hundred and ninety-four: Provided, That the claimant or claimants of any mining location, in order to secure the benefits of this act, shall cause to be recorded in the office where the location notice or certificate is filed, on or before December thirty-first, eighteen hundred and ninety-four, a notice that he or they in good faith intend to hold and work said claim: Provided, however, That the provisions of this act shall not apply to the State of South Dakota.

Sec. 2. That this act shall take effect from and after its passage.

(Money expended in a tunnel considered as expended on the lode. Act of Congress approved February 11, 1875 (18 Stat. L., 315.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section two thousand three hundred and twenty-four of the Revised Statutes, be, and the same

is hereby, amended so that where a person or company has or may run a tunnel for the purpose of developing a lode or lodes, owned by said person or company, the money so expended in said tunnel shall be taken and considered as expended on said lode or lodes, whether located prior to or since the passage of said act; and such person or company shall not be required to perform work on the surface of said lode or lodes in order to hold the same as required by said act.

REGULATION.

18. Upon the failure of any one of several co-owners of a vein, lode, or ledge, which has not been entered, to contribute his proportion of the expenditures necessary to hold the claim or claims so held in ownership in common, the co-owners, who have performed the labor or made the improvements as required by said Revised Statutes, may, at the expiration of the year, give such delinquent co-owner personal notice in writing, or notice by publication in the newspaper published nearest the claim for at least once a week for ninety days; and if upon the expiration of ninety days after such notice in writing, or upon the expiration of one hundred and eighty days after the first newspaper publication of notice, the delinquent co-owner shall have failed to contribute his proportion to meet such expenditures or improvements, his interest in the claim by law passes to his co-owners who have made the expenditures or improvements as aforesaid. Where a claimant alleges ownership of a forfeited interest under the foregoing provision, the sworn statement of the publisher as to the facts of publication, giving dates and a printed copy of the notice published, should be furnished, and the claimant must swear that the delinquent co-owner failed to contribute his proper proportion within the period fixed by the statute.

TUNNELS.

Sec. 2323, R. S. Where a tunnel is run for the development of a vein or lode, or for the discovery of mines, the owners of such tunnel shall have the right of possession of all veins or lodes within three thousand feet from the face of such tunnel on the line thereof, not previously known to exist, discovered in such tunnel, to the same extent as if discovered from

the surface; and locations on the line of such tunnel of veins or lodes not appearing on the surface, made by other parties after the commencement of the tunnel, and while the same is being prosecuted with reasonable diligence, shall be invalid; but failure to prosecute the work on the tunnel for six months shall be considered as an abandonment of the right to all undiscovered veins on the line of such tunnel.

REGULATIONS.

19. The effect of this is simply to give the proprietors of a mining tunnel run in good faith the possessory right to fifteen hundred feet of any blind lodes cut, discovered, or intersected by such tunnel, which were not previously known to exist, within three thousand feet from the face or point of commencement of such tunnel, and to prohibit other parties, after the commencement of the tunnel, from prospecting for and making locations of lodes on the line thereof and within said distance of three thousand feet, unless such lodes appear upon the surface or were previously known to exist.

20. The term "face," as used in said section, is construed and held to mean the first working face formed in the tunnel, and to signify the point at which the tunnel actually enters cover; it being from this point that the three thousand feet are to be counted upon which prospecting is prohibited as aforesaid.

21. To avail themselves of the benefits of this provision of law, the proprietors of a mining tunnel will be required, at the time they enter cover as aforesaid, to give proper notice of their tunnel location by erecting a substantial post, board, or monument at the face or point of commencement thereof, upon which should be posted a good and sufficient notice, giving the names of the parties or company claiming the tunnel right; the actual or proposed course or direction of the tunnel; the height and width thereof, and the course and distance from such face or point of commencement to some permanent well-known objects in the vicinity by which to fix and determine the locus in manner heretofore set forth applicable to locations of veins or lodes, and at the time of posting such notice they shall, in order that miners or prospectors may be enabled to determine whether or not they are within the lines of the tunnel, establish the boundary lines thereof, by stakes or monuments placed along

such lines at proper intervals, to the terminus of the three thousand feet from the face or point of commencement of the tunnel, and the lines so marked will define and govern as to the specific boundaries within which prospecting for lodes not previously known to exist is prohibited while work on the tunnel is being prosecuted with reasonable diligence.

22. At the time of posting notice and marking out the lines of the tunnel as aforesaid, a full and correct copy of such notice of location defining the tunnel claim must be filed for record with the mining recorder of the district, to which notice must be attached the sworn statement or declaration of the owners, claimants, or projectors of such tunnel, setting forth the facts in the case; stating the amount expended by themselves and their predecessors in interest in prosecuting work thereon; the extent of the work performed, and that it is bona fide their intention to prosecute work on the tunnel so located and described with reasonable diligence for the development of a vein or lode, or for the discovery of mines, or both, as the case may be. This notice of location must be duly recorded, and, with the said sworn statement attached, kept on the recorder's files for future reference.

23. By a compliance with the foregoing much needless difficulty will be avoided, and the way for the adjustment of legal rights acquired in virtue of said Section 2323 will be made much more easy and certain.

24. This office will take particular care that no improper advantage is taken of this provision of law by parties making or professing to make tunnel locations, ostensibly for the purposes named in the statute, but really for the purpose of monopolizing the lands lying in front of their tunnels to the detriment of the mining interests and to the exclusion of bona fide prospectors and miners, but will hold such tunnel claimants to a strict compliance with the terms of the statutes; and a reasonable diligence on their part in prosecuting the work is one of the essential conditions of their implied contract. Negligence or want of due diligence will be construed as working a forfeiture of their right to all undiscovered veins on the line of such tunnel.

PLACERS.

Sec. 2329, R. S. Claims usually called "placers," including all forms of deposit, excepting veins of quartz, or other rock in place, shall be subject to entry and patent, under like circumstances and conditions, and upon similar proceedings, as are provided for vein or lode claims; but where the lands have been previously surveyed by the United States, the entry in its exterior limits shall conform to the legal subdivisions of the public lands.

Sec. 2330, R. S. Legal subdivisions of forty acres may be subdivided into ten-acre tracts; and two or more persons, or associations of persons, having contiguous claims of any size, although such claims may be less than ten acres each, may make joint entry thereof; but no location of a placer claim, made after the ninth day of July, eighteen hundred and seventy, shall exceed one hundred and sixty acres for any one person or association of persons, which location shall conform to the United States surveys; and nothing in this section contained shall defeat or impair any bona fide pre-emption or homestead claim upon agricultural lands, or authorize the sale of the improvements of any bona fide settler to any purchaser.

Sec. 2331, R. S. Where placer claims are upon surveyed lands, and conform to legal subdivisions, no further survey or plat shall be required, and all placer-mining claims located after the tenth day of May, eighteen hundred and seventy-two, shall conform as near as practicable with the United States system of public-land surveys, and the rectangular subdivisions of such surveys, and no such location shall include more than twenty acres for each individual claimant; but where placer claims can not be conformed to legal subdivisions, survey and plat shall be made as on unsurveyed lands; and where by the segregation of mineral lands in any legal subdivision a quantity of agricultural land less than forty acres remains, such fractional portion of agricultural land may be entered by any party qualified by law, for homestead or pre-emption purposes.

REGULATION.

25. But one discovery of mineral is required to support a placer location, whether it be of twenty acres by an individual, or of one hundred and sixty acres or less by an association of persons.

BUILDING STONE.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That any person authorized to enter lands under the mining laws of the United States may enter lands that are chiefly valuable for building stone under the provisions of the law in relation to placer-mineral claims: Provided, That lands reserved for the benefit of the public schools or donated to any State shall not be subject to entry under this act. (Act Aug. 4, 1892, 27 Stat., 348.)

26. This act extends the mineral-land laws so as to bring lands chiefly valuable for building stone within the provisions of said law by authorizing a placer entry of such lands. It does not operate, however, to withdraw lands chiefly valuable for building stone from entry under any existing law applicable thereto. Registers and receivers should therefore make a reference to said act on the entry papers in the case of all placer entries made for lands containing stone chiefly valuable for building purposes. It will be noted that lands reserved for the benefit of public schools or donated to any State are not subject to entry under said act.

PETROLEUM AND OTHER MINERAL OILS.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That any person authorized to enter lands under the mining laws of the United States may enter and obtain patent to lands containing petroleum or other mineral oils, and chiefly valuable therefor, under the provisions of the laws relating to placer mineral claims: Provided, That lands containing such petroleum or other mineral oils which have heretofore been filed upon, claimed, or improved as mineral, but not yet

patented, may be held and patented under the provisions of this act the same as if such filing, claim, or improvement were subsequent to the date of the passage hereof. (Act Feb. 11, 1897, 29 Stat., 526.)

REGULATIONS.

27. It is to be observed that the provisions of the mineral laws relating to placers are by said act extended so as to allow the location and entry thereunder of public lands chiefly valuable for petroleum or other mineral oils, and entries of that nature made prior to the passage of said act are to be considered as though made thereunder.

28. By Section 2330 authority is given for the subdivision of forty-acre legal subdivisions into ten-acre lots, which is intended for the greater convenience of miners in segregating their claims both from one another and from intervening agricultural lands.

29. It is held, therefore, that under a proper construction of the law these ten-acre lots in mining districts should be considered and dealt with, to all intents and purposes, as legal subdivisions, and that an applicant having a legal claim which conforms to one or more of these ten-acre lots, either adjoining or cornering, may make entry thereof, after the usual proceedings, without further survey or plat.

30. In cases of this kind, however, the notice given of the application must be very specific and accurate in description, and as the forty-acre tracts may be subdivided into ten-acre lots, either in the form of squares of ten by ten chains, or, if parallelograms, five by twenty chains, so long as the lines are parallel and at right angles with the lines of the public surveys, it will be necessary that the notice and application state specifically what ten-acre lots are sought to be patented in addition to the other data required in the notice.

31. Where the ten-acre subdivision is in the form of a square it may be described, for instance, as the "SE. ¼ of the SW. ¼ of NW. ¼," or, if in the form of a

parallelogram as aforesaid, it may be described as the "W. ½ of the W. ½ of the SW. ¼ of the NW. ¼ (or the N. ½ of the S. ½ of the NE. ¼ of the SE. ¼) of section ——, township ——, range ——," as the case may be; but, in addition to this description of the land, the notice must give all the other data that is required in a mineral application, by which parties may be put on inquiry as to the premises sought to be patented. The proofs submitted with applications for claims of this kind must show clearly the character and the extent of the improvements upon the premises.

The proof of improvements must show their value to be not less than five hundred dollars and that they were made by the applicant for patent or his grantors. The annual expenditure to the amount of $100, required by Section 2324, Revised Statutes, must be made upon placer claims as well as lode claims.

32. Applicants for patent to a placer claim, who are also in possession of a known vein or lode included therein, must state in their application that the placer includes such vein or lode. The published and posted notices must also include such statement. If veins or lodes lying within a placer location are owned by other parties, the fact should be distinctly stated in the application for patent, and in all the notices. But in all cases whether the lode is claimed or excluded, it must be surveyed and marked upon the plat; the field notes and plat giving the area of the lode claim or claims and the area of the placer separately. It should be remembered that an application which omits to include an application for a known vein or lode therein, must be construed as a conclusive declaration that the applicant has no right of possession to the vein or lode. Where there is no known lode or vein, the fact must appear by the affidavit of two or more witnesses.

33. By Section 2330 it is declared that no location of a placer claim, made after July 9, 1870, shall exceed one hundred and sixty acres for any one person or association of persons, which location shall conform to the United States surveys.

34. Section 2331 provides that all placer-mining claims located after May 10, 1872, shall conform as nearly as practicable with the United States systems of public surveys and the subdivisions of such surveys, and no

such locations shall include more than twenty acres for each individual claimant.

35. The foregoing provisions of law are construed to mean that after the 9th day of July, 1870, no location of a placer claim can be made to exceed one hundred and sixty acres, whatever may be the number of locators associated together, or whatever the local regulations of the district may allow; and that from and after May 10, 1872, no location can exceed twenty acres for each individual participating therein; that is, a location by two persons can not exceed forty acres, and one by three persons can not exceed sixty acres.

36. The regulations hereinbefore given as to the manner of marking locations on the ground, and placing the same on record, must be observed in the case of placer locations so far as the same are applicable, the law requiring, however, that where placer claims are upon surveyed public lands the locations must hereafter be made to conform to legal subdivisions thereof as near as practicable.

PROCEDURE TO OBTAIN PATENT TO MINERAL LANDS.

Sec. 2325, R. S. A patent for any land claimed and located for valuable deposits may be obtained in the following manner: Any person, association, or corporation authorized to locate a claim under this chapter, having claimed and located a piece of land for such purposes, who has, or have, complied with the terms of this chapter, may file in the proper land office an application for a patent, under oath, showing such compliance, together with a plat and field notes of the claim or claims in common, made by or under the direction of the United States surveyor-general, showing accurately the boundaries of the claim or claims, which shall be distinctly marked by monuments on the ground, and shall post a copy of such plat, together with a notice of such application for a patent, in a conspicuous place on the land embraced in such plat previous to the filing of the application for a patent, and shall file an affidavit of at least two persons that such notice has been duly posted, and shall file a copy of the notice in such land office, and shall there-

upon be entitled to a patent for the land, in the manner following: The register of the land office, upon the filing of such application, plat, field notes, notices and affidavits, shall publish a notice that such application has been made, for the period of sixty days, in a newspaper to be by him designated as published nearest to such claim; and he shall also post such notice in his office for the same period. The claimant at the time of filing this application, or at any time thereafter, within the sixty days of publication, shall file with the register a certificate of the United States surveyor-general that five hundred dollars' worth of labor has been expended or improvements made upon the claim by himself or grantors; that the plat is correct, with such further description by such reference to natural objects or permanent monuments as shall identify the claim, and furnish an accurate description, to be incorporated in the patent. At the expiration of the sixty days of publication the claimant shall file his affidavit, showing that the plat and notice have been posted in a conspicuous place on the claim during such period of publication. If no adverse claim shall have been filed with the register and the receiver of the proper land office at the expiration of the sixty days of publication, it shall be assumed that the applicant is entitled to a patent, upon the payment to the proper officer of five dollars per acre, and that no adverse claim exists; and thereafter no objection from third parties to the issuance of a patent shall be heard, except it be shown that the applicant has failed to comply with the terms of this chapter.

(Application for patent may be made by authorized agent.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section twenty-three hundred and twenty-five of the Revised Statutes of the United States be amended by adding thereto the following words: "Provided, That where the claimant for a patent is not a resident of or within the land district wherein the vein, lode, ledge, or deposit sought to be patented is located, the application for patent and the affidavits required to be made in this section by the claimant for such patent may be made by his, her, or its authorized agent, where said agent is conversant

with the facts sought to be established by said affidavits: And provided, That this section shall apply to all applications now pending for patents to mineral lands." Sec. 1. Act Congress approved January 22, 1880 (21 Stat. L., 61.)

Sec. 2328, R. S. Applications for patents for mining claims under former laws now pending may be prosecuted to a final decision in the General Land Office; but in such cases where adverse rights are not affected thereby, patents may issue in pursuance of the provisions of this chapter; and all patents for mining claims upon veins or lodes heretofore issued shall convey all the rights and privileges conferred by this chapter where no adverse rights existed on the tenth day of May, eighteen hundred and seventy-two.

REGULATIONS.

37. As a condition for the making of application for patent according to section 2325, there must be a preliminary showing of work or expenditure upon each location, either by showing the full amount sufficient to the maintenance of possession under Section 2324 for the pending year; or, if there has been failure, it should be shown that work has been resumed so as to prevent relocation by adverse parties after abandonment.

The "pending year" means the calendar year in which application is made, and has no reference to a showing of work at date of the final entry.

38. This preliminary showing may, where the matter is unquestioned, consist of the affidavit of two or more witnesses familiar with the facts.

LODE CLAIM.

39. The claimant is required, in the first place, to have a correct survey of his claim made under authority of the surveyor-general of the State or Territory in which the claim lies, such survey to show with accuracy the exterior surface boundaries of the claim, which boundaries are required to be distinctly marked by monuments on the ground. Four plats and one copy of the original field notes in each case will be prepared by the surveyor-general; one plat and the

original field notes to be retained in the office of the surveyor-general, one copy of the plat to be given the claimant for posting upon the claim, one plat and a copy of the field notes to be given the claimant for filing with the proper register, to be finally transmitted by that officer, with other papers in the case, to this office, and one plat to be sent by the surveyor-general to the register of the proper land district, to be retained on his files for future reference. As there is no resident surveyor-general for the State of Arkansas, applications for the survey of mineral claims in said State should be made to the Commissioner of this office, who, under the law, is ex officio the United States surveyor-general.

40. The survey and plat of mineral claims required to be filed in the proper land office with application for patent must be made subsequent to the recording of the location of the mine; and when the original location is made by survey of a United States deputy surveyor such location survey can not be substituted for that required by the statute, as above indicated.

DIRECTIONS FOR PREPARING PLAT.

41. The surveyors-general should designate all surveyed mineral claims by a progressive series of numbers, beginning with survey No. 37, irrespective as to whether they are situated on surveyed or unsurveyed lands, the claim to be so designated at date of issuing the order therefor, in addition to the local designation of the claim; it being required in all cases that the plat and field notes of the survey of a claim must, in addition to the reference to permanent objects in the neighborhood, describe the locus of the claim, with reference to the lines of public surveys, by a line connecting a corner of the claim with the nearest public corner of the United States surveys, unless such claim be on unsurveyed lands at a distance of more than two miles from such public corner, in which latter case it should be connected with a United States mineral monument. Such connecting line must not be more than two miles in length and should be measured on the ground direct between the points, or calculated from actually surveyed traverse lines if the nature of the country should not permit direct measurement. If a regularly established survey corner is within two miles of a claim situated on unsurveyed

lands the connection should be made with such corner in preference to a connection with a United States mineral monument. The connecting line must be surveyed by the deputy mineral surveyor at the time of his making the particular survey and be made a part thereof.

42. Upon the approval of the survey of a mining claim made upon surveyed lands the surveyor-general will prepare and transmit to the local land office and to this office a diagram tracing showing the portions of legal 40-acre subdivisions made fractional by reason of the mineral survey, designating each of such portions by the proper lot number, beginning with No. 1 in each section, and giving the area of each lot.

43. The following particulars should be observed in the survey of every mining claim:

(1) The exterior boundaries of the claim should be represented on the plat of survey and in the field notes.

(2) The intersection of the lines of the survey with the lines of conflicting prior surveys should be noted in the field notes and represented upon the plat.

(3) Conflicts with unsurveyed claims, where the applicant for survey does not claim the area in conflict, should be shown by actual survey.

(4) The total area of the claim embraced by the exterior boundaries should be stated, and also the area in conflict with each intersecting survey, substantially as follows:

	Acres.
Total area of claim	10.50
Area in conflict with survey No. 302	1.56
Area in conflict with survey No. 948	2.33
Area in conflict with Mountain Maid lode mining claim, unsurveyed	1.48

It does not follow that because mining surveys are required to exhibit all conflicts with prior surveys the areas of conflict are to be excluded. The field notes and plat are made a part of the application for patent, and care should be taken that the description does not inadvertently exclude portions intended to be retained. It is better that the application for patent should state the portions to be excluded in express terms.

44. The claimant is then required to post a copy of the plat of such survey in a conspicuous place upon the claim, together with notice of his intention to apply for

a patent therefor, which notice will give the date of posting, the name of the claimant, the name of the claim; the mining district and county; whether or not the location is of record, and, if so, where the record may be found, giving the book and page thereof; the number of feet claimed along the vein and the presumed direction thereof; the number of feet claimed on the lode in each direction from the point of discovery or other well-defined place on the claim; the names of all adjoining and conflicting claims, or, if none exist, the notice should so state.

45. After posting the said plat and notice upon the premises, the claimant will file with the proper register and receiver a copy of such plat and the field notes of survey of the claim, accompanied by the affidavit of at least two credible witnesses that such plat and notice are posted conspicuously upon the claim, giving the date and place of such posting; a copy of the notice so posted to be attached to and form a part of said affidavit. The plat forwarded as part of the proof should not be folded, but rolled, so as to prevent creasing, and either transmitted in a separate package or so enclosed with the other papers that it may pass through the mails without creasing or mutilation. If forwarded separately, the letter transmitting the papers should state the fact.

46. Accompanying the field notes so filed must be the sworn statement of the claimant that he has the possessory right to the premises therein described, in virtue of a compliance by himself (and by his grantors, if he claims by purchase) with the mining rules, regulations, and customs of the mining district, State, or Territory in which the claim lies, and with the mining laws of Congress; such sworn statement to narrate briefly, but as clearly as possible, the facts constituting such compliance, the origin of his possession, and the basis of his claim to a patent.

47. This sworn statement must be supported by a copy of the location notice, certified by the officer in charge of the records where the same is recorded, and where the applicant for patent claims the interests of others associated with him in making the location, or only as purchaser, in addition to the copy of the location notice, must be furnished a complete abstract of title as shown by the record in the office where the transfers are by law required to be recorded, certi-

fied to by the officer in charge of the record, under his official seal. The officer should also certify that no conveyances affecting the title to the claim in question appear of record other than those set forth in the abstract, which abstract shall be brought down to the date of the application for patent. Where the applicant claims as sole locator, his affidavit should be furnished to the effect that he has disposed of no interest in the land located.

48. In the event of the mining records in any case having been destroyed by fire or otherwise lost, affidavit of the fact should be made, and secondary evidence of possessory title will be received, which may consist of the affidavit of the claimant, supported by those of any other parties cognizant of the facts relative to his location, occupancy, possession, improvements, &c.; and in such case of lost records, any deeds, certificates of location or purchase, or other evidence which may be in the claimant's possession and tend to establish his claim, should be filed.

49. Before receiving and filing a mineral application for patent, local officers will be particular to see that it includes no land which is embraced in a prior or pending application for patent or entry, or for any lands embraced in a railroad selection, or for which publication is pending or has been made by any other claimants, and if, in their opinion, after investigation, it should appear that a mineral application should not, for these or other reasons, be accepted and filed, they should formally reject the same, giving the reasons therefor, and allow the applicant thirty days for appeal to this office under the Rules of Practice.

50. Upon the receipt of these papers, if no reason appears for rejecting the application, the register will, at the expense of the claimant (who must furnish the agreement of the publisher to hold applicant for patent alone responsible for charges of publication), publish a notice of such application for the period of sixty days in a newspaper published nearest to the claim, and will post a copy of such notice in his office for the same period. When the notice is published in a weekly newspaper, ten consecutive insertions are necessary; when in a daily newspaper, the notice must appear in each issue for sixty-one consecutive issues, the first day of issue being excluded in estimating the period of sixty days.

51. The notices so published and posted must be as full and complete as possible, and embrace all the data given in the notice posted upon the claim. Too much care can not be exercised in the preparation of these notices, inasmuch as upon their accuracy and completeness will depend, in a great measure, the regularity and validity of the whole proceeding.

52. The register shall publish the notice of application for patent in a paper of established character and general circulation, to be by him designated as being the newspaper published nearest the land.

53. The claimant at the time of filing application for patent, or at any time within the sixty days of publication, is required to file with the register, a certificate of the surveyor-general that not less than five hundred dollars' worth of labor has been expended or improvements made, by the applicant or his grantors, upon each location embraced in the application, or if the application embraces several locations held in common, that an amount equal to five hundred dollars for each location, has been so expended upon, and for the benefit of the entire group; that the plat filed by the claimant is correct; that the field notes of the survey, as filed, furnish such an accurate description of the claim as will, if incorporated in a patent, serve to fully identify the premises and that such reference is made therein to natural objects or permanent monuments as will perpetuate and fix the locus thereof; provided, that as to all applications for patent made and passed to entry before July 1, 1898, or which are by protests or adverse claims prevented from being passed to entry before that time, where the application embraces several locations held in common, proof of an expenditure of five hundred dollars upon the group will be sufficient and an expenditure of that amount need not be shown to have been made upon, or for the benefit of, each location embraced in the application.[1]

54. The surveyor-general should derive his information upon which to base his certificate as to the value of labor expended or improvements made from his deputy who makes the actual survey and examination upon the premises, and such deputy should specify with

1 As amended March 14, 1898.

particularity and full detail the character and extent of such improvements.

55. It will be the more convenient way to have this certificate indorsed by the surveyor-general, both upon the plat and field notes of survey filed by the claimant as aforesaid.

56. After the sixty days' period of newspaper publication has expired, the claimant will furnish from the office of publication a sworn statement that the notice was published for the statutory period, giving the first and last day of such publication, and his own affidavit showing that the plat and notice aforesaid remained conspicuously posted upon the claim sought to be patented during said sixty days' publication, giving the dates.

57. Upon the filing of this affidavit the register will, if no adverse claim was filed in his office during the period of publication, permit the claimant to pay for the land according to the area given in the plat and field notes of survey aforesaid, at the rate of five dollars for each acre and five dollars for each fractional part of an acre, except as otherwise provided by law, the receiver issuing the usual duplicate receipt therefor. The claimant will also make a sworn statement of all charges and fees paid by him for publication and surveys, together with all fees and money paid the register and receiver of the land office, after which the complete record will be forwarded to the Commissioner of the General Land Office and a patent issued thereon if found regular.

PROTEST.

58. At any time prior to the issuance of patent, protest may be filed against the patenting of the claim as applied for, upon any ground tending to show that the applicant has failed to comply with the law in a matter which would avoid the claim. Such protest can not, however, be made the means of preserving a surface conflict lost by failure to adverse or lost by the judgment of the court in an adverse suit. One holding a present joint interest in a mineral location included in an application for patent who is excluded from the application, so that his interest would not be protected by the issue of patent thereon, may protest against the issuance of a patent as applied for, setting forth in such protest the nature and extent of his

interest in such location, and such a protestant will be deemed a party in interest entitled to appeal. This results from the holding that a co-owner excluded from an application for patent does not have an "adverse" claim within the meaning of Sections 2325 and 2326 of the Revised Statutes. See Turner v. Sawyer, 150 U. S., 578-586.

59. Any party applying to make entry as trustee must disclose fully the nature of the trust and the name of the cestui que trust; and such trustee, as well as the beneficiaries, must furnish satisfactory proof of citizenship; and the names of beneficiaries, as well as that of the trustee, must be inserted in the final certificate of entry.

PLACERS.

60. The proceedings to obtain patents for claims usually called placers, including all forms of deposit, excepting veins of quartz or other rock in place, are similar to the proceedings prescribed for obtaining patents for vein or lode claims; but where said placer claim shall be upon surveyed lands, and conforms to legal subdivisions, no further survey or plat will be required; and all placer mining claims located after May 10, 1872, shall conform as nearly as practicable with the United States system of public-land surveys and the rectangular subdivisions of such surveys, and no such location shall include more than twenty acres for each individual claimant; but where placer claims can not be conformed to legal subdivisions, survey and plat shall be made as on unsurveyed lands. But where such claims are located previous to the public surveys, and do not conform to legal subdivisions, survey, plat and entry thereof may be made according to the boundaries thereof, provided the location is in all respects legal.

61. The proceedings for obtaining patents for veins or lodes having already been fully given, it will not be necessary to repeat them here, it being thought that careful attention thereto by applicants and the local officers will enable them to act understandingly in the matter and make such slight modifications in the notice, or otherwise, as may be necessary in view of the different nature of the two classes of claims; placer claims being fixed, however, at two dollars and fifty cents per acre, or fractional part of an acre.

(Proceedings for patent for placer claim, etc. 10 May, 1872, c. 152, s. 11, v. 17, p. 94.)

Sec. 2333, R. S. Where the same person, association, or corporation is in possession of a placer claim, and also a vein or lode included within the boundaries thereof, application shall be made for a patent for the placer claim, with the statement that it includes such vein or lode, and in such case a patent shall issue for the placer claim, subject to the provisions of this chapter, including such vein or lode, upon the payment of five dollars per acre for such vein or lode claim, and twenty-five feet of surface on each side thereof. The remainder of the placer claim, or any placer claim not embracing any vein or lode claim, shall be paid for at the rate of two dollars and fifty cents per acre, together with all costs of proceedings; and where a vein or lode, such as is described in section twenty-three hundred and twenty, is known to exist within the boundaries of a placer claim, an application for a patent for such placer claim which does not include an application for the vein or lode claim shall be construed as a conclusive declaration that the claimant of the placer claim has no right of possession of the vein or lode claim; but where the existence of a vein or lode in a placer claim is not known, a patent for the placer claim shall convey all valuable mineral and other deposits within the boundaries thereof.

REGULATIONS.

62. The first care in recognizing an application for patent upon a placer claim must be exercised in determining the exact classification of the lands. To this end the clearest evidence of which the case is capable should be presented.

(1) If the claim be all placer ground, that fact must be stated in the application and corroborated by accompanying proofs; if of mixed placers and lodes, it should be so set out, with a description of all known lodes situated within the boundaries of the claim. A specific declaration, such as is required by Section 2333, Revised Statutes, must be furnished as to each lode intended to be claimed. All other known lodes are, by the silence of the applicant, excluded by law from all claim by him, of whatsoever nature, possessory or otherwise.

(2) Deputy surveyors shall, at the expense of the

parties, make full examination of all placer claims surveyed by them, and duly note the facts as specified in the law, stating the quality and composition of the soil, the kind and amount of timber and other vegetation, the locus and size of streams, and such other matters as may appear upon the surface of the claim. This examination should include the character and extent of all surface and underground workings, whether placer or lode, for mining purposes.

(3) In addition to these data, which the law requires to be shown in all cases, the deputy should report with reference to the proximity of centers of trade or residence; also of well-known systems of lode deposit or of individual lodes. He should also report as to the use or adaptability of the claim for placer mining; whether water has been brought upon it in sufficient quantity to mine the same, or whether it can be procured for that purpose; and, finally, what works or expenditures have been made by the claimant or his grantors for the development of the claim, and their situation and location with respect to the same as applied for.

(4) This examination should be reported by the deputy under oath to the surveyor-general, and duly corroborated; and a copy of the same should be furnished with the application for patent to the claim, constituting a part thereof, and included in the oath of the applicant.

(5) Applications awaiting entry, whether published or not, must be made to conform to these regulations, with respect to examination as to the character of the land. Entries already made will be suspended for such additional proofs as may be deemed necessary in each case.

MILL SITES.

63. Mill sites are not mineral entries. On the contrary, the land entered must be shown to be nonmineral. They are simply auxiliary to the working of mineral claims, but as the section granting the right of entry is embraced in the chapter of the Revised Statutes relating to mineral lands, they are therefore included in this circular.

(Patents for non-mineral lands, etc. 10 May, 1872, c. 152, s. 15, v. 17, p. 96.)

Sec. 2337, R. S. Where nonmineral land not contiguous to the vein or lode is used or occupied by the

proprietor of such vein or lode for mining or milling purposes, such nonadjacent surface ground may be embraced and included in an application for a patent for such vein or lode, and the same may be patented therewith, subject to the same preliminary requirements as to survey and notice as are applicable to veins or lodes; but no location hereafter made of such nonadjacent land shall exceed five acres, and payment for the same must be made at the same rate as fixed by this chapter for the superficies of the lode. The owner of a quartz mill or reduction works, not owning a mine in connection therewith, may also receive a patent for his mill site, as provided in this section.

REGULATIONS.

64. To avail themselves of this provision of law parties holding the possessory right to a vein or lode, and to a piece of nonmineral land not contiguous thereto, for mining or milling purposes, not exceeding the quantity allowed for such purpose by Section 2337, United States Revised Statutes, or prior laws, under which the land was appropriated, the proprietors of such vein or lode may file in the proper land office their application for a patent, under oath, in manner already set forth herein, which application, together with the plat and field notes, may include, embrace, and describe, in addition to the vein or lode, such noncontiguous mill site, and after due proceedings as to notice, etc., a patent will be issued conveying the same as one claim. The owner of a patented lode may, by an independent application, secure a mill site if good faith is manifest in its use or occupation in connection with the lode and no adverse claim exists.

65. Where the original survey includes a lode claim and also a mill site the lode claim should be described in the plat and field notes as "Sur. No. 37, A," and the mill site as "Sur. No. 37, B," or whatever may be its appropriate numerical designation; the course and distance from a corner of the mill site to a corner of the lode claim to be invariably given in such plat and field notes, and a copy of the plat and notice of application for patent must be conspicuously posted upon the mill site as well as upon the vein or lode for the statutory period of sixty days. In making the entry no separate receipt or certificate need be issued for the mill site, but the whole area of both lode and mill site

will be embraced in one entry, the price being five dollars for each acre and fractional part of an acre embraced by such lode and mill site claim.

66. In case the owner of a quartz mill or reduction works is not the owner or claimant of a vein or lode the law permits him to make application therefor in the same manner prescribed herein for mining claims, and after due notice and proceedings, in the absence of a valid adverse filing, to enter and receive a patent for his mill site at said price per acre.

67. In every case there must be satisfactory proof that the land claimed as a mill site is not mineral in character, which proof may, where the matter is unquestioned, consist of the sworn statement of two or more persons capable, from acquaintance with the land, to testify understandingly.

PROOF OF CITIZENSHIP.

Sec. 2321, R. S. Proof of citizenship, under this chapter, may consist, in the case of an individual, of his own affidavit thereof; in the case of an association of persons unincorporated, of the affidavit of their authorized agent, made on his own knowledge or upon information and belief; and in the case of a corporation organized under the laws of the United States, or of any State or Territory thereof, by the filing of a certified copy of their charter or certificate of incorporation.

REGULATIONS.

68. The proof necessary to establish the citizenship of applicants for mining patents must be made in the following manner: In case of an incorporated company, a certified copy of their charter or certificate of incorporation must be filed. In case of an association of persons unincorporated, the affidavit of their duly authorized agent, made upon his own knowledge or upon information and belief, setting forth the residence of each person forming such association, must be submitted. This affidavit must be accompanied by a power of attorney from the parties forming such association, authorizing the person who makes the affidavit of citizenship to act for them in the matter of their application for patent.

69. In case of an individual or an association of individuals who do not appear by their duly authorized agent, you will require the affidavit of each applicant,

showing whether he is a native or naturalized citizen, when and where born, and his residence.

70. In case an applicant has declared his intention to become a citizen or has been naturalized, his affidavit must show the date, place, and the court before which he declared his intention, or from which his certificate of citizenship issued, and present residence.

71. The affidavit of the claimant as to his citizenship may be taken before the register or receiver, or any other officer authorized to administer oaths within the land district; or, if the claimant is residing beyond the limits of the district, the affidavit may be taken before the clerk of any court of record or before any notary public of any State or Territory.

72. If citizenship is established by the testimony of disinterested persons, such testimony may be taken at any place before any person authorized to administer oaths, and whose official character is duly verified.

73. In sending up the papers in the case the register must not omit certifying to the fact that the notice was posted in his office for the full period of sixty days, such certificate to state distinctly when such posting was done and how long continued.

74. No entry will be allowed until the register has satisfied himself, by a careful examination, that proper proofs have been filed upon all the points indicated in official regulations in force, and that they show a sufficient bona fide compliance with the laws and such regulations.

75. The consecutive series of numbers of mineral entries must be continued, whether the same are of lode or placer claims or mill sites.

POSSESSORY RIGHT.

Sec. 2332, R. S. Where such person or association, they and their grantors, have held and worked their claims for a period equal to the time prescribed by the statute of limitations for mining claims of the State or Territory where the same may be situated, evidence of such possession and working of the claims for such period shall be sufficient to establish a right to a patent thereto under this chapter, in the absence of any adverse claim; but nothing in this chapter shall be deemed to impair any lien which may have attached in any way whatever to any mining claim or property thereto attached prior to the issuance of a patent.

REGULATIONS.

76. This provision of law will greatly lessen the burden of proof, more especially in the case of old claims located many years since, the records of which, in many cases, have been destroyed by fire, or lost in other ways during the lapse of time, but concerning the possessory right to which all controversy or litigation has long been settled.

77. When an applicant desires to make his proof of possessory right in accordance with this provision of law, he will not be required to produce evidence of location, copies of conveyances, or abstracts of title, as in other cases, but will be required to furnish a duly certified copy of the statute of limitation of mining claims for the State or Territory, together with his sworn statement giving a clear and succinct narration of the facts as to the origin of his title, and likewise as to the continuation of his possession of the mining ground covered by his application; the area thereof; the nature and extent of the mining that has been done thereon; whether there has been any opposition to his possession, or litigation with regard to his claim and, if so, when the same ceased; whether such cessation was caused by compromise or by judicial decree, and any additional facts within the claimant's knowledge having a direct bearing upon his possession and bona fides which he may desire to submit in support of his claim.

78. There should likewise be filed a certificate, under seal of the court having jurisdiction of mining cases within the judicial district embracing the claim, that no suit or action of any character whatever involving the right of possession to any portion of the claim applied for is pending, and that there has been no litigation before said court affecting the title to said claim or any part thereof for a period equal to the time fixed by the statute of limitations for mining claims in the State or Territory as aforesaid, other than that which has been finally decided in favor of the claimant.

79. The claimant should support his narrative of facts relative to his possession, occupancy, and improvements by corroborative testimony of any disinterested person or persons of credibility who may be cognizant of the facts in the case and are capable of testifying understandingly in the premises.

ADVERSE CLAIMS.

Sec. 2326, R. S. Where an adverse claim is filed during the period of publication, it shall be upon oath of the person or persons making the same, and shall show the nature, boundaries, and extent of such adverse claim, and all proceedings, except the publication of notice and making and filing of the affidavit thereof, shall be stayed until the controversy shall have been settled or decided by a court of competent jurisdiction, or the adverse claim waived. It shall be the duty of the adverse claimant, within thirty days after filing his claim, to commence proceedings in a court of competent jurisdiction, to determine the question of the right of possession, and prosecute the same with reasonable diligence to final judgment; and a failure so to do shall be a waiver of his adverse claim. After such judgment shall have been rendered, the party entitled to the possession of the claim, or any portion thereof, may, without giving further notice, file a certified copy of the judgment roll with the register of the land office, together with the certificate of the surveyor-general that the requisite amount of labor has been expended or improvements made thereon, and the description required in other cases, and shall pay to the receiver five dollars per acre for his claim, together with the proper fees, whereupon the whole proceedings and the judgment roll shall be certified by the register to the Commissioner of the General Land Office, and a patent shall issue thereon for the claim, or such portion thereof as the applicant shall appear, from the decision of the court, to rightly possess. If it appears from the decision of the court that several parties are entitled to separate and different portions of the claim, each party may pay for his portion of the claim with the proper fees, and file the certificate and description by the surveyor-general, whereupon the register shall certify the proceedings and judgment roll to the Commissioner of the General Land Office, as in the preceding case, and patents shall issue to the several parties according to their respective rights. Nothing herein contained shall be construed to prevent the alienation of a title conveyed by a patent for a mining claim to any person whatever.

(In action brought title not established in either party. Act of Congress approved March 3, 1881 (21 Stat. L., 505.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That if, in any action brought pursuant to section twenty-three hundred and twenty-six of the Revised Statutes, title to the ground in controversy shall not be established by either party, the jury shall so find, and judgment shall be entered according to the verdict. In such case costs shall not be allowed to either party, and the claimant shall not proceed in the land office or be entitled to a patent for the ground in controversy until he shall have perfected his title.

(Adverse claim may be verified by agent. Sec. 1, act of Congress approved April 26, 1882 (22 Stat. L., 49.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the adverse claim required by section twenty-three hundred and twenty-six of the Revised Statutes may be verified by the oath of any duly authorized agent or attorney in fact of the adverse claimant cognizant of the facts stated; and the adverse claimant, if residing or at the time being beyond the limits of the district wherein the claim is situated, may make oath to the adverse claim before the clerk of any court of record of the United States of the State or Territory where the adverse claimant may then be, or before any notary public of such State or Territory.

REGULATIONS.

80. An adverse mining claim must be filed with the register and receiver of the land office where the application for patent was filed, or with the register and receiver of the district in which the land is situated at the time of filing the adverse claim. It must be on the oath of the adverse claimant, or it may be verified by the oath of any duly authorized agent or attorney in fact of the adverse claimant cognizant of the facts stated.

81. Where an agent or attorney in fact verifies the adverse claim, he must distinctly swear that he is such agent or attorney, and accompany his affidavit by proof thereof.

82. The agent or attorney in fact must make the

affidavit in verification of the adverse claim within the land district where the claim is situated.

83. The adverse notice must fully set forth the nature and extent of the intereference or conflict; whether the adverse party claims as a purchaser for valuable consideration or as a locator; if the former, a certified copy of the original location, the original conveyance, a duly certified copy thereof, or an abstract of title from the office of the proper recorder should be furnished, or if the transaction was a merely verbal one he will narrate the circumstances attending the purchase, the date thereof, and the amount paid, which facts should be supported by the affidavit of one or more witnesses, if any were present at the time, and if he claims as a locator he must file a duly certified copy of the location from the office of the proper recorder.

84. In order that the "boundaries" and "extent" of the claim may be shown, it will be incumbent upon the adverse claimant to file a plat showing his entire claim, its relative situation or position with the one against which he claims, and the extent of the conflict. This plat must be made from an actual survey by a United States deputy surveyor, who will officially certify thereon to its correctness; and in addition there must be attached to such plat of survey a certificate or sworn statement by the surveyor as to the approximate value of the labor performed or improvements made upon the claim by the adverse party or his predecessors in interest, and the plat must indicate the position of any shafts, tunnels, or other improvements, if any such exist, upon the claim of the party opposing the application, and by which party said improvements were made: Provided, however, That if the application for patent describes the claim by legal subdivisions, the adverse claimant, if also claiming by legal subdivisions, may describe his adverse claim in the same manner without further survey or plat.

85. Upon the foregoing being filed within the sixty days' publication, the register, or in his absence the receiver, will give notice in writing to both parties to the contest that such adverse claim has been filed, informing them that the party who filed the adverse

claim will be required within thirty days from the date of such filing to commence proceedings in a court of competent jurisdiction to determine the question of right of possession, and to prosecute the same with reasonable diligence to final judgment, and that, should such adverse claimant fail to do so, his adverse claim will be considered waived, and the application for patent be allowed to proceed upon its merits.

86. When an adverse claim is filed as aforesaid, the register or receiver will indorse upon the same the precise date of filing, and preserve a record of the date of notifications issued thereon; and thereafter all proceedings on the application for patent will be suspended, with the exception of the completion of the publication and posting of notices and plat, and the filing of the necessary proof thereof, until the controversy shall have been adjudicated in court, or the adverse claim waived or withdrawn.

87. Where an adverse claim has been filed and suit thereon commenced within the statutory period, and final judgment determining the right of possession rendered in favor of the applicant, it will not be sufficient for him to file with the register a certificate of the clerk of the court, setting forth the facts as to such judgment, but he must, before he is allowed to make entry, file a certified copy of the judgment, together with the other evidence required by Section 2326, Revised Statutes.

88. Where such suit has been dismissed, a certificate of the clerk of the court to that effect or a certified copy of the order of dismissal will be sufficient.

89. After an adverse claim has been filed and suit commenced, a relinquishment or other evidence of abandonment will not be accepted, but the case must be terminated and proof thereof furnished as required by the last two paragraphs.

90. Where an adverse claim has been filed, but no suit commenced against the applicant for patent within the statutory period, a certificate to that effect by the clerk of the State court having jurisdiction in the case, and also by the clerk of the circuit court of the

United States for the district in which the claim is situated, will be required.

VERIFICATION OF AFFIDAVITS IN RELATION TO MINERAL ENTRIES.

Sec. 2335, R. S. All affidavits required to be made under this chapter may be verified before any officer authorized to administer oaths within the land district where the claims may be situated, and all testimony and proofs may be taken before any such officer, and, when duly certified by the officer taking the same, shall have the same force and effect as if taken before the register and receiver of the land office. In cases of contest as to the mineral or agricultural character of land, the testimony and proofs may be taken as herein provided on personal notice of at least ten days to the opposing party; or if such party can not be found, then by publication of at least once a week for thirty days in a newspaper, to be designated by the register of the land office as published nearest to the location of such land; and the register shall require proof that such notice has been given.

(Sec. 2, act of Congress approved April 26, 1882 (22 Stat. L., 49.)

Sec. 2. That applicants for mineral patents, if residing beyond the limits of the district wherein the claim is situated, may make any oath or affidavit required for proof of citizenship before the clerk of any court of record, or before any notary public of any State or Territory.

(See Adverse claims.)

GENERAL LEGISLATION.

Sec. 2338, R. S. As a condition of sale, in the absence of necessary legislation by Congress, the local legislature of any State or Territory may provide rules for working mines, involving easements, drainage, and other necessary means to their complete development; and those conditions shall be fully expressed in the patent.

Sec. 2339. Whenever, by priority of possession, rights to the use of water for mining, agricultural, manufacturing, or other purposes, have vested and accrued, and the same are recognized and acknowledged by the local customs, laws, and the decisions of courts, the possessors and owners of such vested rights shall be maintained and protected in the same; and the right of way for the construction of ditches and canals for the purposes herein specified is acknowledged and confirmed; but whenever any person, in the construction of any ditch or canal, injures or damages the possession of any settler on the public domain, the party committing such injury or damage shall be liable to the party injured for such injury or damage.

Sec. 2340, R. S. All patents granted, or pre-emption or homesteads allowed, shall be subject to any vested and accrued water rights, or rights to ditches and reservoirs used in connection with such water rights, as may have been acquired under or recognized by the preceding section.

Sec. 2341, R. S. Wherever, upon the lands heretofore designated as mineral lands, which have been excluded from survey and sale, there have been homesteads made by citizens of the United States, or persons who have declared their intention to become citizens, which homesteads have been made, improved, and used for agricultural purposes, and upon which there have been no valuable mines of gold, silver, cinnabar, or copper discovered, and which are properly agricultural lands, the settlers or owners of such homesteads shall have a right of pre-emption thereto, and shall be entitled to purchase the same at the price of one dollar and twenty-five cents per acre, and in quantity not to exceed one hundred and sixty acres; or they may avail themselves of the provisions of chapter five of this title, relating to "Homesteads."

Sec. 2342, R. S. Upon the survey of the lands described in the preceding section, the Secretary of the Interior may designate and set apart such portions of the same as are clearly agricultural lands, which lands shall

thereafter be subject to pre-emption and sale as other public lands, and be subject to all the laws and regulations applicable to the same.

Sec. 2343, R. S. The President is authorized to establish additional land districts, and to appoint the necessary officers under existing laws, wherever he may deem the same necessary for the public convenience in executing the provisions of this chapter.

Sec. 2344, R. S. Nothing contained in this chapter shall be construed to impair in any way, rights or interests in mining property acquired under existing laws; nor to affect the provisions of the act entitled "An act granting to A. Sutro the right of way and other privileges to aid in the construction of a draining and exploring tunnel to the Comstock lode, in the State of Nevada," approved July twenty-five, eighteen hundred and sixty-six.

Sec. 2345, R. S. The provisions of the preceding sections of this chapter shall not apply to the mineral lands situated in the States of Michigan, Wisconsin, and Minnesota, which are declared free and open to exploration and purchase, according to legal subdivisions, in like manner as before the tenth day of May, eighteen hundred and seventy-two. And any bona fide entries of such lands within the States named since the tenth of May, eighteen hundred and seventy-two, may be patented without reference to any of the foregoing provisions of this chapter. Such lands shall be offered for public sale in the same manner, at the same minimum price, and under the same rights of pre-emption as other public lands.

Sec. 2346, R. S. No act passed at the first session of the Thirty-eighth Congress, granting lands to States or corporations to aid in the construction of roads or for other purposes, or to extend the time of grants made prior to the thirtieth day of January, eighteen hundred and sixty-five, shall be so construed as to embrace mineral lands, which in all cases are reserved exclusively to the United States, unless otherwise specially provided in the act or acts making the grant.

(Missouri and Kansas excluded from the operation of the mineral laws. Act of Congress approved May 5, 1876, (19 Stat. L., 52.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That within the States of Missouri and Kansas deposits of coal, iron, lead, or other mineral be, and they are hereby, excluded from the operation of the act entitled "An act to promote the development of the mining resources of the United States," approved May tenth, eighteen hundred and seventy-two and all lands in said States shall be subject to disposal as agricultural lands.

(Citizens of Colorado, Nevada, and the Territories authorized to fell and remove timber on the public domain for mining and domestic purposes. Act of Congress approved June 3, 1878 (20 Stat. L., 88.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That all citizens of the United States and other persons, bona fide residents of the State of Colorado, or Nevada, or either of the Territories of New Mexico, Arizona, Utah, Wyoming, Dakota, Idaho, or Montana, and all other mineral districts of the United States, shall be, and are hereby, authorized and permitted to fell and remove, for building, agricultural, mining, or other domestic purposes, any timber or other trees growing or being on the public lands, said lands being mineral, and not subject to entry under existing laws of the United States, except for mineral entry, in either of said States, Territories, or districts of which such citizens or persons may be at the time bona fide residents, subject to such rules and regulations as the Secretary of the Interior may prescribe for the protection of the timber and of the undergrowth growing upon such lands, and for other purposes: Provided, The provisions of this act shall not extend to railroad corporations.

Sec. 2. That it shall be the duty of the register and the receiver of any local land office in whose district any mineral land may be situated to ascertain from

time to time whether any timber is being cut or used upon any such lands, except for the purposes authorized by this act, within their respective land districts; and, if so, they shall immediately notify the Commissioner of the General Land Office of that fact: and all necessary expenses incurred in making such proper examinations shall be paid and allowed such register and receiver in making up their next quarterly accounts.

Sec. 3. Any person or persons who shall violate the provisions of this act, or any rules and regulations in pursuance thereof made by the Secretary of the Interior, shall be deemed guilty of a misdemeanor, and, upon conviction, shall be fined in any sum not exceeding five hundred dollars, and to which may be added imprisonment for any term not exceeding six months.

(Alabama excepted from the operation of the mineral laws. Act of Congress approved March 3, 1883, (22 Stat. L., 487.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That within the State of Alabama all public lands, whether mineral or otherwise, shall be subject to disposal only as agricultural lands: Provided, however, That all lands which have heretofore been reported to the General Land Office as containing coal and iron shall first be offered at public sale: And provided further, That any bona fide entry under the provisions of the homestead law of lands within said State heretofore made may be patented without reference to an act approved May tenth, eighteen hundred and seventy-two, entitled "An act to promote the development of the mining resources of the United States," in cases where the persons making application for such patents have in all other respects complied with the homestead law relating thereto.

AN ACT PROVIDING A CIVIL GOVERNMENT FOR ALASKA.

(Mining laws extended to the District of Alaska. Act of Congress approved May 17, 1884 (23 Stat. L., 24.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, * * *

Sec. 8. That the said district of Alaska is hereby created a land district, and a United States land office for said district is hereby located at Sitka. The commissioner provided for by this act to reside at Sitka shall be ex officio register of said land office, and the clerk provided for by this act shall be ex officio receiver of public moneys and the marshal provided for by this act shall be ex officio surveyor-general of said district and the laws of the United States relating to mining claims, and the rights incident thereto, shall, from and after the passage of this act, be in full force and effect in said district, under the administration thereof herein provided for, subject to such regulations as may be made by the Secretary of the Interior, approved by the President: Provided, That the Indians or other persons in said district shall not be disturbed in the possession of any lands actually in their use or occupation or now claimed by them, but the terms under which such persons may acquire title to such lands is reserved for future legislation by Congress: And provided further, That parties who have located mines or mineral privileges therein under the laws of the United States applicable to the public domain, or who have occupied and improved or exercised acts of ownership over such claims, shall not be disturbed therein, but shall be allowed to perfect their title to such claims by payment as aforesaid: And provided also, That the land not exceeding six hundred and forty acres at any station now occupied as missionary stations among the Indian tribes in said section, with the improvements thereon erected by or for such societies, shall be continued in the occupancy of the several religious societies to which said missionary stations respectively belong until action by Congress. But nothing contained in this act shall be construed to

put in force in said district the general land laws of the United States.

(See amendment approved July 24, 1897, pages 311 and 312 hereof.)

* * * * * * *

(Right of entry under all the land laws restricted to 320 acres. (Repealed, see act Mar. 3, 1891, sec. 17.) Reservation in patents for right of way for ditches and canals constructed. Act of Congress approved August 30, 1890. (26 Stat. L., 371.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, * * *

No person who shall after the passage of this act, enter upon any of the public lands with a view to occupation, entry, or settlement under any of the land laws shall be permitted to acquire title to more than three hundred and twenty acres in the aggregate, under all of said laws, but this limitation shall not operate to curtail the right of any person who has heretofore made entry or settlement on the public lands, or whose occupation, entry or settlement, is validated by this act: Provided, That in all patents for lands hereafter taken up under any of the land laws of the United States or on entries or claims validated by this act west of the one hundredth meridian, it shall be expressed that there is reserved from the lands in said patent described a right of way thereon for ditches or canals constructed by the authority of the United States. * * *

AN ACT TO REPEAL TIMBER-CULTURE LAWS, AND FOR OTHER PURPOSES.

(Town sites on mineral lands authorized. Lands entered under the mineral laws not included in restriction to 320 acres. Act of Congress approved March 3, 1891 (26 Stat. L., 1095.)

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, * * *

Sec. 16. That town-site entries may be made by incorporated towns and cities on the mineral lands of

the United States, but no title shall be acquired by such towns or cities to any vein of gold, silver, cinnabar, copper, or lead, or to any valid mining claim or possession held under existing law. When mineral veins are possessed within the limits of an incorporated town or city, and such possession is recognized by local authority or by the laws of the United States, the title to town lots shall be subject to such recognized possession and the necessary use thereof and when entry has been made or patent issued for such town sites to such incorporated town or city, the possessor of such mineral vein may enter and receive patent for such mineral vein, and the surface ground appertaining thereto: Provided, That no entry shall be made by such mineral-vein claimant for surface ground where the owner or occupier of the surface ground shall have had possession of the same before the inception of the title of the mineral-vein applicant.

Sec. 17. That reservoir sites located or selected and to be located and selected under the provisions of "An act making appropriations for sundry civil expenses of the Government for the fiscal year ending June thirtieth, eighteen hundred and eighty-nine, and for other purposes," and amendments thereto, shall be restricted to and shall contain only so much land as is actually necessary for the construction and maintenance of reservoirs; excluding so far as practicable lands occupied by actual settlers at the date of the location of said reservoirs and that the provisions of "An act making appropriations for sundry civil expenses of the Government for the fiscal year ending June thirtieth, eighteen hundred and ninety-one, and for other purposes," which reads as follows, viz.: "No person who shall after the passage of this act enter upon any of the public lands with a view to occupation, entry, or settlement under any of the land laws shall be permitted to acquire title to more than three hundred and twenty acres in the aggregate under all said laws," shall be construed to include in the maximum amount of lands the title to which is permitted to be acquired by one person only agricultural lands and not include lands entered or sought to be entered under mineral land laws.

APPOINTMENT OF DEPUTIES FOR SURVEY OF MINING CLAIMS—CHARGES FOR SURVEYS AND PUBLICATIONS—FEES OF REGISTERS AND RECEIVERS, ETC.

Sec. 2334, R. S. The surveyor-general of the United States may appoint in each land district containing mineral lands as many competent surveyors as shall apply for appointment to survey mining claims. The expenses of the survey of vein or lode claims, and the survey and subdivision of placer claims into smaller quantities than one hundred and sixty acres, together with the cost of publication of notices, shall be paid by the applicants, and they shall be at liberty to obtain the same at the most reasonable rates, and they shall also be at liberty to employ any United States deputy surveyor to make the survey. The Commissioner of the General Land Office shall also have power to establish the maximum charges for surveys and publication of notices under this chapter; and, in case of excessive charges for publication, he may designate any newspaper published in a land district where mines are situated for the publication of mining notices in such district, and fix the rates to be charged by such paper; and, to the end that the Commissioner may be fully informed on the subject, each applicant shall file with the register a sworn statement of all charges and fees paid by such applicant for publication and surveys, together with all fees and money paid the register and the receiver of the land office, which statement shall be transmitted, with the other papers in the case, to the Commissioner of the General Land Office.

REGULATIONS.

91. Under this authority of law the following rates have been established as the maximum charges for newspaper publications in mining cases:

(1) Where a daily newspaper is designated the charge shall not exceed seven dollars for each ten lines of space occupied, and where a weekly newspaper is designated as the medium of publication five dollars for the same space will be allowed. Such charge shall be accepted as full payment for publication in each

issue of the newspaper for the entire period required by law.

It is expected that these notices shall not be so abbreviated as to curtail the description essential to a perfect notice, and the said rates established upon the understanding that they are to be in the usual body type used for advertisements.

(2) For the publication of citations in contests or hearings involving the character of lands the charges shall not exceed eight dollars for five publications in weekly newspapers or ten dollars for publications in daily newspapers for thirty days.

92. The surveyors-general of the several districts will, in pursuance of said law, appoint in each land district as many competent deputies for the survey of mining claims as may seek such appointment, it being distinctly understood that all expenses of these notices and surveys are to be borne by the mining claimants and not by the United States. The claimant may employ any deputy surveyor within such district to do his work in the field. Each deputy mineral surveyor before entering upon the duties of his office or appointment shall be required to enter into such bond for the faithful performance of his duties as may be prescribed by the regulations of the Land Department in force at that time.

93. With regard to the platting of the claim and other office work in the surveyor-general's office, that officer will make an estimate of the cost thereof, which amount the claimant will deposit with any assistant United States treasurer or designated depository in favor of the United States Treasurer, to be passed to the credit of the fund created by "individual depositors for surveys of the public lands," and file with the surveyor-general duplicate certificates of such deposit in the usual manner.

94. The surveyors-general will endeavor to appoint mineral deputy surveyors, so that one or more may be located in each mining district for the greater convenience of miners.

95. The usual oaths will be required of these deputies and their assistants as to the correctness of each survey executed by them.

The duty of the deputy mineral surveyor ceases when he has executed the survey and returned the field notes and preliminary plat thereof with his re-

port to the surveyor-general. He will not be allowed to prepare for the mining claimant the papers in support of an application for patent or otherwise perform the duties of an attorney before the land office in connection with a mining claim.

The surveyors-general and local land officers are expected to report any infringement of this regulation to this office.

96. Should it appear that excessive or exorbitant charges have been made by any surveyor or any publisher, prompt action will be taken with the view of correcting the abuse.

97. The fees payable to the register and receiver for filing and acting upon applications for mineral-land patents are five dollars to each officer, to be paid by the applicant for patent at the time of filing, and the like sum of five dollars is payable to each officer by an adverse claimant at the time of filing his adverse claim. (Sec. 2238, R. S., paragraph 9.)

98. At the time of payment of fee for mining application or adverse claim the receiver will issue his receipt therefor in duplicate, one to be given the applicant or adverse claimant, as the case may be, and one to be forwarded to the Commissioner of the General Land Office on the day of issue. The receipt for mining application should have attached the certificate of the register that the lands included in the application are vacant lands subject to such appropriation.

99. The register and receiver will, at the close of each month, forward to this office an abstract of mining applications filed, and a register of receipts, accompanied with an abstract of mineral lands sold, and an abstract of adverse claims filed.

100. The fees and purchase money received by registers and receivers must be placed to the credit of the United States in the receiver's monthly and quarterly account, charging up in the disbursing account the sums to which the register and receiver may be respectively entitled as fees and commissions, with limitations in regard to the legal maximum.

HEARINGS TO DETERMINE CHARACTER OF LANDS.

101. The Rules of Practice in cases before the United States district land offices, the General Land Office,

and the Department of the Interior will, so far as applicable, govern in all cases and proceedings arising in contests and hearings to determine the mineral character of lands.

102. No public land shall be withheld from entry as agricultural land on account of its mineral character, except such as is returned by the surveyor-general as mineral; and the presumption arising from such a return may be overcome by testimony taken in the manner hereinafter described.

103. Hearings to determine the character of lands are practically of two kinds, as follows:

(1) Lands returned as mineral by the surveyor-general.

When such lands are sought to be entered as agricultural under laws which require the submission of final proof after due notice by publication and posting, the filing of the proper nonmineral affidavit in the absence of allegations that the land is mineral will be deemed sufficient as a preliminary requirement. A satisfactory showing as to character of land must be made when final proof is submitted.

In case of application to enter, locate, or select such lands as agricultural, under laws in which the submission of final proof after due publication and posting is not required, notice thereof must first be given by publication for sixty days and posting in the local office during the same period, and affirmative proof as to the character of the land submitted. In the absence of allegations that the land is mineral, and upon compliance with this requirement, the entry, location, or selection will be allowed, if otherwise regular.

(2) Lands returned as agricultural and alleged to be mineral in character.

Where as against the claimed right to enter such lands as agricultural it is alleged that the same are mineral, or are applied for as mineral lands, the proceedings in this class of cases will be in the nature of a contest, and the practice will be governed by the rules in force in contest cases.

RAILROAD AND STATE SELECTIONS.

104. Where a railroad company seeks to select lands not returned as mineral, but within six miles of any

mining location, claim, or entry, or where in the case of a selection by a State, the lands sought to be selected are within a township in which there is a mining location, claim, or entry, publication must be made of the lands selected at the expense of the railroad company or State for a period of sixty days, with posting for the same period in the land office for the district in which the lands are situated, during which period of publication the local land officers will receive protests or contests for any of said tracts or subdivisions of lands claimed to be more valuable for mining than for agricultural purposes.

105. At the expiration of the period of publication the register and receiver will forward to the Commissioner of the General Land Office the published list, noting thereon any protests, or contests, or suggestions as to the mineral character of any such lands, together with any information they may have received as to the mineral character of any of the lands mentioned in said list, when a hearing may be ordered.

106. At the hearings under either of the aforesaid classes, the claimants and witnesses will be thoroughly examined with regard to the character of the land; whether the same has been thoroughly prospected; whether or not there exists within the tract or tracts claimed any lode or vein of quartz or other rock in place, bearing gold, silver, cinnabar, lead, tin, or copper, or other valuable deposit which has ever been claimed, located, recorded, or worked; whether such work is entirely abandoned, or whether occasionally resumed; if such lode does exist, by whom claimed, under what designation, and in which subdivision of the land it lies; whether any placer mine or mines exist upon the land; if so, what is the character thereof—whether of the shallow-surface description, or of the deep cement, blue lead, or gravel deposits; to what extent mining is carried on when water can be obtained, and what the facilities are for obtaining water for mining purposes; upon what particular ten-acre subdivisions mining has been done, and at what time the land was abandoned for mining purposes, if abandoned at all.

107. The testimony should also show the agricultural capacities of the land, what kind of crops are raised thereon, and the value thereof; the number of acres actually cultivated for crops of cereals or vegetables,

and within which particular ten-acre subdivision such crops are raised; also which of these subdivisions embrace the improvements, giving in detail the extent and value of the improvements, such as house, barn, vineyard, orchard, fencing, etc., and mining improvements.

108. The testimony should be as full and complete as possible; and in addition to the leading points indicated above, where an attempt is made to prove the mineral character of lands which have been entered under the agricultural laws, it should show at what date, if at all, valuable deposits of mineral were first known to exist on the lands.

109. When the case comes before this office, such decision will be made as the law and the facts may justify; in cases where a survey is necessary to set apart the mineral from the agricultural land, the proper party, at his own expense, will be required to have the work done, at his option, either by United States deputy, county, or other local surveyor; application therefor must be made to the register and receiver, accompanied by a description of the land to be segregated, and the evidence of service upon the opposite party of notice of his intention to have such segregation made; the register and receiver will forward the same to this office, when the necessary instructions for the survey will be given. The survey in such case, where the claims to be segregated are vein or lode claims, must be executed in such manner as will conform to the requirements in Section 2320, United States Revised Statutes, as to length and width and parallel end lines.

110. Such surveys when executed must be properly sworn to by the surveyor, either before a notary public, officer of a court of record, or before the register or receiver, the deponent's character and credibility to be properly certified to by the officer administering the oath.

111. Upon the filing of the plat and field notes of such survey with the register and receiver, duly sworn to as aforesaid, they will transmit the same to the surveyor-general for his verification and approval; who, if he finds the work correctly performed, will properly mark out the same upon the original township plat in his office, and furnish authenticated copies of such plat and description both to the proper local

land office and to this office, to be affixed to the duplicate and triplicate township plats respectively.

112. With the copy of plat and description furnished the local office and this office, must be a diagram tracing, verified by the surveyor-general, showing the claim or claim segregated, and designating the separate fractional agricultural tracts in each 40-acre legal subdivision by the proper lot number, beginning with No. 1 in each section, and giving the area in each lot, the same as provided in paragraph 45, in the survey of mining claims on surveyed lands.

113. The fact that a certain tract of land is decided upon testimony to be mineral in character is by no means equivalent to an award of the land to a miner. In order to secure a patent for such land he must proceed as in other cases, in accordance with the foregoing regulations.

Blank forms for proofs in mineral cases are not furnished by the General Land Office.

MINERAL ENTRIES WITHIN FOREST RESERVES.

The following is an extract from circular entitled Rules and Regulations governing Forest Reservations, established under Section 24 of the Act of March 3, 1891 (26 Stat. L., 1095). Approved June 30, 1897. (24 L. D., 589-593-594.)

LOCATION AND ENTRY OF MINERAL LANDS.

19. The law provides that "any mineral lands in any forest reservation which have been or which may be shown to be such, and subject to entry under the existing mining laws of the United States and the rules and regulations applying thereto, shall continue to be subject to such location and entry," notwithstanding the reservation. This makes mineral lands in the forest reserves subject to location and entry under the general mining laws in the usual manner.

20. Owners of valid mining locations made and held in good faith under the mining laws of the United States and the regulations thereunder are authorized and permitted to fell and remove from such mining claims any timber growing thereon, for actual mining purposes in connection with the particular claim from

which the timber is felled or removed. (For further use of timber by miners see below, under heading "Free use of timber and stone.")

FREE USE OF TIMBER AND STONE.

21. The law provides that "The Secretary of the Interior may permit, under regulations to be prescribed by him, the use of timber and stone found upon such reservations, free of charge, by bona fide settlers, miners, residents, and prospectors for minerals, for firewood, fencing, buildings, mining, prospecting, and other domestic purposes, as may be needed by such persons for such purposes; such timber to be used within the State or Territory, respectively, where such reservations may be located."

This provision is limited to persons resident in forest reservations who have not a sufficient supply of timber or stone on their own claims or lands for the purposes enumerated, or for necessary use in developing the mineral or other natural resources of the lands owned or occupied by them. Such persons, therefore, are permitted to take timber and stone from public lands in the forest reservations under the terms of the law above quoted, strictly for their individual use on their own claims or lands owned or occupied by them, but not for sale or disposal, or use on other lands, or by other persons: Provided, That where the stumpage value exceeds one hundred dollars, application must be made to and permission given by the Department.

PART III.

FORMS.

Blank forms for proofs in mineral cases are not furnished by the General Land Office. See paragraph 113 of the Mining Regulations, p. 170.

Unnecessary verbiage has been avoided and the statements so made as to cover only material points.

(4—689.)

APPLICATION TO UNITED STATES SURVEYOR-GENERAL FOR SURVEY OF MINING CLAIM.

Denver, Colo., January 25, 1893.

UNITED STATES SURVEYOR GENERAL,
Denver, Colorado.

Sir: T. E. Jenkins et al., claimants, hereby make application for an official survey, under the provisions of Chapter Six, Title Thirty-two, of the Revised Statutes of the United States, and regulations and instructions thereunder, of the mining claim known as the Cumro Placer and Poorman, Hawley, Aetna, and Podunk lodes and the Poorman mill site, situate in Pike's Peak Mining District, El Paso County, Colorado, in Sections 17, 19 and 20, Township No. 14 S., Range No. 69 W. Said claim is based upon valid locations made on various dates, 18——, and duly recorded on various dates, 18——, and is fully described in the duly certified copies of the record of the location certificates filed herewith. Said certificates contain the names of the locators, the dates of location, and such a definite description of the claim by reference to natural objects or permanent monuments as will identify the claim, and said locations have been distinctly

marked by monuments on the ground, so that their boundaries can be readily traced.

I request that you will send me an estimate of the amount required to defray the expenses of platting and other work in your office, required under the regulations, that I may make proper deposit therefor, and that thereupon you will cause the survey to be made by A. L. Hawley, United States deputy mineral surveyor, and proper action to be taken thereon by your office, as required by the United States mining laws and regulations thereunder.

T. E. JENKINS,
For himself and co-claimants.

P. O. address: Denver,
Arapahoe County, Colorado.

LOCATION CERTIFICATE—LODE CLAIM.

State of..... } ss.
County of..... }

KNOW ALL MEN BY THESE PRESENTS, That ....., the undersigned citizen.. of the United States (or, having declared ..... intention of becoming .... citizen..) ha.. this ..... day of ..... 18.... located and claimed, and by these presents do.... locate and claim by right of discovery and location, in compliance with the Mining Acts of Congress, approved May 10, 1872, and all subsequent acts and with local customs, laws, and regulations, as well as with the laws of the State of ....., ... linear feet and horizontal measurement on the ..... lode, vein, ledge, or deposit, along the vein thereof, with all its dips, angles and variations, as allowed by law, together with ..... feet on each side of the middle of said vein at the surface, so far as can be determined from present developments; and all veins, lodes, ledges, or deposits, and surface ground within the lines of said claim, ... feet running .....° .....′ .....″ from the center of the discovery shaft, and ..... feet running .....° .....′ .....″ from the center of said discovery shaft, said discovery shaft being situate upon said lode, vein, ledge, or deposit, and within the lines of said claim, in .....

Mining District, County of ..... and State of ....., described by metes and bounds, as follows, to wit:

(Here give as perfect a description of the claim as possible in order to fix the locus giving approximate bearings to prominent fixed objects in the neighborhood or neighboring claims.)

Said lode was discovered on the .....day of..... 189..
Date of location..... 189..
Date of Certificate..... 189..

.....[Seal.]
.....[Seal.]
.....[Seal.]

(Note—Under the laws of Oregon, which are applicable to the Territory of Alaska, this location notice should be recorded within thirty (30) days from the date of discovery and location, although continuous working of the claim obviates, under these laws, the necessity of recording said notice. The notice should by all means be recorded as a measure of safety.

Under the Montana statutes the notice of location must be verified by the oath of the locator or his agent. This is not necessary, however, under the laws of Oregon.

Should the locator desire to amend his location to take in abandoned ground, to change the boundaries, or to make the description more certain and perfect, the amended location should specifically state the purpose of amendment, and that such amendment is made without waiver of rights and privileges under the original location, giving the date thereof.

This form, with slight modifications, can be appropriately used for a mill-site location.)

AMENDED LOCATION CERTIFICATE.

State of ———, } ss.
County of ———. }

KNOW ALL MEN BY THESE PRESENTS, That ....., the undersigned, ha.. this .... day of ....., amended, located, and

claimed, and by these presents do.. amend, locate, and claim, by right of discovery and amended location, in compliance with the mining acts of Congress, approved May 10, 1872, and all subsequent acts, and with local customs, laws, and regulations ..... linear feet and horizontal measurement, on the ..... lode, vein, ledge, or deposit, along the vein thereof, with all its dips, angles and variations, as allowed by law, together with ..... feet on each side of the middle of said vein at the surface, so far as can be determined from present developments, and all veins, lodes, ledges, or deposits and surface ground within the lines of said claim ..... feet running .....easterly ..... from center of discovery ..... point in tunnel ....., and ..... feet running .....westerly ..... from center of discovery ..... point ....., said discovery ..... point ..... being situate upon said lode, vein, ledge, or deposit, and within the lines of said claim in ..... Mining District, County of ....., and State of ....., described by metes and bounds as follows, to wit:

(Here describe the claim by metes and bounds.)

This being the same lode originally located on the ..... day of ....., and recorded on the ..... day of ....., in Book ....., Page ....., in the office of the Recorder of ..... County. This further and amended certificate of location is made without waiver of any previously acquired rights, but for the purpose of correcting any errors in the original location, description, or record ....

Said lode was discovered the ..... day of ....., A. D.	.....[Seal.]
Attest:.....	.....[Seal.]
Date of amended location	.....[Seal.]
Date of amended certificate ....., A. D.	.....[Seal.]
	.....[Seal.]
	.....[Seal.]
	.....[Seal.]

LOCATION CERTIFICATE—PLACER CLAIM.

State of..... } ss.
County of..... }

KNOW ALL MEN BY THESE PRESENTS, That ....., the undersigned citizen.. of the United States (or having declared ..... intention of becoming .... citizen..) ha.. this ..... day of ..... 18.. located and claimed, and by these presents do.... locate and claim by right of discovery and location, in compliance with the Mining Act of Congress, approved May 10, 1872, and all subsequent acts and with local customs, laws, and regulations, as well as with the laws of the State of ....., the following described placer mining ground, to-wit: (If the claim is located upon surveyed land, and embraces the subdivisions of the governmental rectangular surveys, the description of the claim should be by legal subdivisions if practicable.) (Here describe the claim as accurately as possible by courses and distances, and also give approximate bearings to some prominent fixed object or permanent monument. The boundaries should be marked by monuments at least at the corners) situated in ..... Mining District, County of ....., and State of .....

This claim shall be known as the ..... Placer Mining Claim, and it is intended to work the same in accordance with the law and regulations applicable thereto.

Dated on the ground this ..... day of ..... 18..... } .....[Seal.] .....[Seal.]

LOCATION CERTIFICATE OF MILL SITE.

To all whom these presents may concern:

KNOW YE, That I, John Smith, of the County of ———, and State of ———, do hereby declare and publish as a legal notice to all the world, that I have a valid right to the occupation, possession,

and enjoyment of all and singular that tract or parcel of land, not exceeding five acres, situate, lying and being in the County of ————, and State of ———— ——, bounded and described as follows:

Poorman Mill Site.

(Here describe the claim by metes and bounds.)

Containing .... acres, more or less.

Together with all and singular the hereditaments and appurtenances thereto belonging or in anywise appertaining.

Witness my hand and seal this ..... day of ....., A. D. 18.....

[Seal.] JOHN SMITH.

LOCATION CERTIFICATE—TUNNEL CLAIM.

State of..... } ss.
County of..... }

KNOW ALL MEN BY THESE PRESENTS, That ....., the undersigned citizen.. of the United States (or having declared ..... intention of becoming .... citizen..) ha.. this ..... day of ..... 18.. located and claimed, and by these presents do.... locate and claim by right of location and in conformity with law, local and statutory, especially Section 2323, U. S. Revised Statutes, a tunnel claim three thousand (3,000) feet in length from the face at which this notice is posted, for the purpose of discovering, exploiting and working on the line thereof, mineral-bearing veins, lodes, or deposits.

The tunnel claim hereby located is described as follows, to-wit: (Here give the courses and distances of boundaries as staked on the surface, marking the line of the tunnel from the face, and also bearings to natural objects, so as to definitely fix the locus) situ-

ate in ..... Mining District, County of ....., and State of .....

.....

Dated on the ground ..... 18....

(This location should be duly recorded the same as other locations.)

NOTICE OF FORFEITURE TO A CO-OWNER.

State of..... } ss.
County of..... }

To.....

You are hereby notified that, ..., the undersigned, ha.... expended in labor or improvements upon the ..... Mining Claim, as part owner.. thereof, the sum of ..... dollars, the same being the expenditure required by law to maintain the possessory right thereto for the year.. 18.....; and that upon your failure to contribute within ninety (90) days from this notice your proportion of such required expenditure, all right, title, and interest in and to said ..... Mining claim (here describe claim, referring to location record if possible) will be forfeited and become the property of the undersigned.

.....

.....

(Note: This notice should be served personally upon the delinquent co-owner, or by publication. See paragraph 18 of the Mining Regulations, page 129 hereof. In case notice is given by publication, the publisher's affidavit is a necessary part of evidence of forfeiture.)

AFFIDAVIT OF FAILURE OF CO-OWNER TO CONTRIBUTE HIS PROPORTION OF ANNUAL ASSESSMENT WORK.

State of..... }
County of..... } ss.

....., being duly sworn, deposes and says that for the year ending .....

18...., he expended as required by Section 2324, U. S. Rev. Stats., at least ..... dollars in labor and improvements upon and for the benefit and development of the ..... lode (or placer) mining claim,[1] situate in ..... Mining District, County of ..... and State of .....; that due notice thereof was personally served upon ...., co-owner, on the ..... day of ....., 18.... (or was duly published in the ..... newspaper, as appears from the affidavit of the publisher herewith), and said co-owner.. ha.... failed and refused to contribute ..... share of said annual assessment work within the time prescribed by law, or at all.

.....

Subscribed and sworn to before me this ..... day of ....., 18.....

(Note: The notice, this affidavit, and the affidavit of the publisher, should be placed of record in the office of the Mining or County Recorder.)

AFFIDAVIT OF ANNUAL ASSESSMENT WORK.

State of..... } ss.
County of..... }

...., being duly sworn, deposes and says that there was expended upon or for the benefit of the ..... mining claim, situate in the ..... Mining District, County of ....., and State of ....., by the owner.. of said claim during the year A. D. 18..... at least ..... dollars.

.....

Subscribed and sworn to before me this ..... day of ....., 18....

.....
Notary Public.

1 If the location is of record, make reference to book and page thereof.

(Note: This affidavit should be filed in the proper office for recording as a measure of caution for the preservation of the evidence.)

POWER OF ATTORNEY TO APPLY FOR PATENT.

KNOW ALL MEN BY THESE PRESENTS, That .... and .... do hereby constitute and appoint .... our attorney in fact, for us and in our names, to take any and all steps that may be necessary to procure from the Government of the United States a patent for the ..... lode mining claim (or placer), situate in ..... Mining District, County of ....., and State of ....., granting the same to us. And, further, to do any and all acts in the premises as we ourselves could do by our own act and in our own proper person.

IN WITNESS WHEREOF we have hereunto set our hands and affixed our seals the ..... day of ..... A. D. 18.....

.....

.....

PROOF OF POSTING OF NOTICE AND PLAT UPON THE BLANK LODE MINING CLAIM.

John Smith and Henry White, being first duly sworn according to law, each for himself, and not one for the other, deposes and says that on the tenth day of April, A. D. 1896, he was present on the Blank Lode mining claim when there was posted in a conspicuous place upon said claim, to-wit, on the discovery shaft house, a plat of mineral survey No. 7777, approved by the United States Surveyor General of the State of Colorado, together with a notice of the application of John Smith for a United States patent for said mining claim, and that a true copy of the notice so posted is hereto attached and made a part hereof.

[Two witnesses sign here.]

JOHN SMITH,
HENRY WHITE.

State of Colorado, } ss.
County of El Paso. }

Subscribed and sworn to before me this tenth day of April, A. D. 1896.

[Seal.] RICHARD JONES,
Notary Public.

(Note: Affix copy of posted notice to this affidavit as a part thereof.)

APPLICATION FOR PATENT FOR THE BLANK LODE MINING CLAIM.

Before the United States Land Office at Pueblo, Colorado.

John Smith, being first duly sworn according to law, deposes and says: [If attorney for applicant, so state.] That by virtue of a compliance with the terms of Chapter six of Title thirty-two, United States Revised Statutes, and acts supplemental thereto or amendatory thereof, and with the laws of the State of Colorado, and with the miners' customs and regulations of the Cripple Creek Mining District, he is the owner of and in the undisputed possession of the Blank Lode mining claim, bearing gold and silver,[1] the same being[2] mineral survey No. 7777, situate in the Cripple Creek Mining District, County of El Paso, State of Colorado, as is more fully shown by the abstract of title, plat and field notes of survey and other papers filed herewith and made a part hereof.

That by such compliance with the laws, customs and regulations, he is entitled to a patent from the United States for the said Blank Lode mining claim, and hereby makes application for such patent.

JOHN SMITH.

1 If a mill site is applied for in connection with a lode claim, insert "and the —— mill site, a tract of non-mineral land, used and occupied for mining and milling purposes in connection with said —— lode claim."

2 If the claim is a placer, taken by legal subdivisions, insert description of the land.

State of Colorado, } ss.
County of El Paso, }

Subscribed and sworn to before me this eleventh day of April, A. D. 1896.

[Seal.] RICHARD JONES,
Notary Public.

4—653.

RECEIVER'S RECEIPT.

MINERAL APPLICATION.

(Original to be immediately forwarded to General Land Office. Duplicate to be given applicant.)

Mineral Application No.. } UNITED STATES LAND OFFICE,
Mineral Survey No..... } at.....
....., 189..

Received from .....
....
....
the sum of ten dollars, being the fee of five dollars payable to the Register and five dollars payable to the Receiver, under paragraph 9 of Section 2238, United States Revised Statutes, for filing and acting upon mineral application No....., for a patent to the ....
... .
... .
..... mining claim.., situate in Section ....., in Township No. ....., of Range.. No. ....., ... Meridian, designated as Mineral Survey No. .....; exclusive of conflict.. with the following mining claim.. or survey..,
... .
... .
... .
... .
... .

....
....
....,
Receiver.

I hereby certify that the mining claim.. to which a patent is applied for as aforesaid, containing .... acres, ... free from conflict with any existing application or entry, and ..... vacant land subject to such appropriation, as appears from examination of the records of this office.

....,
Register.

....., 189..

AGREEMENT OF PUBLISHER.

State of Colorado, } ss.
County of..... }

I, the undersigned, publisher of the Cripple Creek Herald, do hereby agree to publish a notice of the application of John Smith for a United States patent for the Blank Lode mining claim, situate in the Pueblo, Colorado, Land District, as such notice is required by law to be published, and to hold the said John Smith alone responsible for the charges and expense of such publication, and do expressly agree to make no charge or claim against the government of the United States, its officers or agents, on account of such publication.

ROBERT GREEN.

Signed this eleventh day of April, A. D., 1896, in the presence of Samuel Johnson.

AFFIDAVIT OF PUBLISHER.

Robert Green, being first duly sworn according to law, deposes and says that he is the publisher of the Cripple Creek Herald, a newspaper of general circulation, published in Cripple Creek, State of Colorado;

that a notice, of which the annexed notice is a true copy, of the application of John Smith for a United States patent for the Blank Lode mining claim, was published in every regular weekly issue of said newspaper and not in a supplement, from the sixteenth day of April, A. D. 1896, to and including the eighteenth day of June, A. D. 1896, said notice being published during ten consecutive weeks.

ROBERT GREEN.

State of Colorado, } ss.
County of El Paso. }

Subscribed and sworn to before me this nineteenth day of June, A. D. 1896.

[Seal.] RICHARD JONES,
Notary Public.

(Note: Affix printed copy of published notice to this affidavit as a part thereof.)

NOTICE TO BE PUBLISHED.

Mineral Application No. .....

United States Land Office, Pueblo, Colorado.
April 11, 1896.

Notice is hereby given that John Smith, whose post-office address is Cripple Creek, Colorado, has made application for a United States patent for the Blank Lode mining claim, mineral survey No. 7777, situate in the Cripple Creek Mining District, County of El Paso, State of Colorado, covering 395 feet of the Blank Lode in a northerly direction from the discovery shaft, and 234.88 feet in a southerly direction therefrom, and lying in the W. ½ of Sec. 32, T. 15 S., R. 69 W., and more particularly described as follows:

Beginning at Cor. No. 1, a pine post in mound of rocks, marked 1—7777, whence the W. ¼ Cor. of Sec. 32, T. 15 S., R. 69 W., 6th P. M., bears N. 87° 13′ W., 2043.33 feet, and running thence,

N. 16° 42′ E., 629.88 feet to Cor. No. 2. Thence,
S. 74° 47′ E., 285.1 feet to Cor. 3. Thence,
S. 16° 42′ W., 629.88 feet to Cor. No. 4. Thence,
N. 74° 47′ W., 285.1 feet to Cor. No. 1, place of beginning,

containing, exclusive of conflict with mineral survey No. 7000, Kohnyo lode claim, 4.07 acres.

The notice of location of this claim is recorded in the office of the Recorder of El Paso County, at page 123 of Book L. of Locations.

Neighboring or adjoining claims are, the Kohnyo lode on the north, claimant unknown, and the Mt. Rosa placer on the south, Jacob Green, claimant.

JOHN WILKINS,
Register.

NOTICE TO BE POSTED UPON CLAIM (WITH PLAT).

Same as above, omitting Land Office caption, and to be signed by claimant instead of by the Register.

PROOF OF CONTINUOUS POSTING OF NOTICE AND PLAT UPON THE BLANK LODE MINING CLAIM.

John Smith, being first duly sworn according to law, deposes and says that he is the applicant for patent for the Blank Lode mining claim, mineral survey No. 7777, situate in the Cripple Creek Mining District, County of El Paso, and State of Colorado.

That a notice of his application for a United States patent for said mining claim, together with a plat of the official survey of said claim, approved by the United States Surveyor General of Colorado, remained posted in a conspicuous place upon said Blank Lode mining claim from the tenth day of April, A. D. 1896, to and including the first day of July, A. D. 1896.

JOHN SMITH.

State of Colorado, } ss.
County of El Paso. }

Subscribed and sworn to before me this second day of July, A. D. 1896.

[Seal.]

RICHARD JONES,
Notary Public.

AFFIDAVIT OF CITIZENSHIP (NATIVE).

John Smith, being first duly sworn according to law, deposes and says that he is the identical John Smith

who is an applicant for patent for the Blank Lode mining claim, mineral survey No. 7777, in the Pueblo, Colorado, Land District; that he is a native-born citizen of the United States, born in Detroit, Michigan, in the year 1860, and is now a resident of Cripple Creek, Colorado.

JOHN SMITH.

State of Colorado, } ss.
County of El Paso. }

Subscribed and sworn to before me this eleventh day of April, A. D. 1896.

[Seal.] RICHARD JONES,
Notary Public.

AFFIDAVIT OF CITIZENSHIP (NATURALIZED).

John Smith, being first duly sworn according to law, deposes and says that he is the identical John Smith who is an applicant for patent for the Blank Lode mining claim, mineral survey No. 7777, in the Pueblo, Colorado, Land District; that he is a naturalized citizen of the United States, born in London, England, in the year 1860, and was naturalized before the District Court for El Paso County, State of Colorado, on the thirtieth day of October, A. D. 1890, and is now a resident of Cripple Creek, Colorado.

JOHN SMITH.

State of Colorado, } ss.
County of El Paso. }

Subscribed and sworn to before me this eleventh day of April, A. D. 1896.

[Seal.] RICHARD JONES,
Notary Public.

SWORN STATEMENT OF FEES AND CHARGES.

John Smith, being first duly sworn according to law, deposes and says that he is the applicant for patent for the Blank Lode mining claim, mineral survey No. 7777, in the Pueblo, Colorado, Land District.

That in the prosecution of said application he has paid out in the manner below indicated the following named sums and no more, to-wit:

To United States Deputy Mineral Surveyor.....$75.00
To credit of United States Surveyor General for office work 35.00
Fee for filing application for patent..... 10.00
For publication of notice of application for patent. 20.00
Purchase price of land entered..... 25.00

JOHN SMITH.

State of Colorado, } ss.
County of El Paso. }

Subscribed and sworn to before me this first day of September, A. D. 1896.

[Seal.] RICHARD JONES,
Notary Public.

PROOF OF NO KNOWN VEINS IN A PLACER CLAIM.

John Smith and Henry White, being first duly sworn according to law, each for himself and not one for the other, deposes and says that he is well acquainted with the Blank placer mining claim, the same being—,[1] having been frequently over and upon the same; that his knowledge of the character of the land embraced in said claim is such as to enable him to testify understandingly relative thereto; that there is not, to the best of his knowledge and belief, within the limits of said placer claim any vein, lode or ledge of mineral-bearing rock in place.

[Two witnesses sign here.] JOHN SMITH.
HENRY WHITE.

State of Colorado, } ss.
County of ..... }

Subscribed and sworn to before me this tenth day of April, A. D. 1896.

RICHARD JONES,
Notary Public.

1 Note:—If the placer is taken by legal subdivisions, insert description; otherwise give the official survey number.

PROOF OF THE NON-MINERAL CHARACTER OF A MILL SITE.

John Smith and Henry White, being first duly sworn according to law, each for himself and not one for the other, deposes and says that he is well acquainted with that certain tract or parcel of land known as the Blank mill site, the same being mineral survey No. 7777, having been frequently over and upon the same; that his knowledge of the character of said land is such as to enable him to testify understandingly relative thereto; that there is not, to the best of his knowledge and belief, within said mill site claim any vein, lode or ledge of mineral-bearing rock in place, nor is there within said claim any valuable mineral deposit; but the land covered by said mill site claim is essentially non-mineral in character.

[Two witnesses sign here.] JOHN SMITH.
HENRY WHITE.

State of Colorado, } ss.
County of ..... }

Subscribed and sworn to before me this tenth day of April, A. D. 1896.

RICHARD JONES,
Notary Public.

ADVERSE CLAIM AND PROTEST.

Before the United States Land Office at Pueblo, Colorado.

Free Silver Lode vs. Blank Lode.

In the matter of the application of John Smith for a United States patent for the Blank Lode mining claim.

To the Honorable Register and Receiver:

Whereas, John Smith did, on the eleventh day of April, A. D. 1896, file in the United States Land Office at Pueblo, State of Colorado, his application for a United States patent for the pretended Blank Lode mining claim, mineral survey No. 7777, situate in the

Cripple Creek Mining District, County of El Paso, State of Colorado, and has given notice of his said application for patent, the legal period of sixty days of publication and posting of said notice not yet having expired:

Now, therefore, comes the Free Silver Mining Company, by William Jones, its duly authorized agent, on this first day of June, A. D. 1896, and enters this its protest against the allowance of mineral entry upon said application for patent for said pretended Blank Lode mining claim, for that, to-wit:

I. Because the said pretended Blank Lode mining claim, applied for as aforesaid, is not the property of the said John Smith, nor is the applicant for patent aforesaid entitled to hold the same under the laws of the United States or of the State of Colorado, or the miners' customs and regulations of the Cripple Creek Mining District.

II. Because a great portion of the said pretended Blank Lode mining claim (which portion is described in the plat filed herewith and made a part hereof, made and certified by a United States Deputy Mineral Surveyor) is owned by and in the possession of your protestant as the Free Silver Lode mining claim, as is shown by the abstract of title to said Free Silver Lode mining claim, filed herewith and made a part hereof, which said ownership and possession is vested in your protestant by virtue of a location of the said Free Silver Lode mining claim upon the vacant, unappropriated public domain, in strict accordance and compliance with the laws of the United States, of the State of Colorado, and with the miners' customs and regulations of the Cripple Creek Mining District, the notice of which said location is recorded in the office of the County Recorder of El Paso County, Colorado, at page 1 of Book M of Locations, which said location was made by Thomas Jenkins, and was conveyed by him to your protestant.

III. Because the said pretended Blank Lode mining claim, applied for as aforesaid, or a great portion thereof, overlaps, conflicts with and embraces the said Free Silver Lode mining claim of your protestant, as is shown by the plat of survey filed herewith and made a part hereof, made and certified by a United States Deputy Mineral Surveyor, which plat shows the true

relative positions of the said pretended Blank Lode mining claim applied for as aforesaid, and of the said Free Silver Lode mining claim of your protestant.

Wherefore, your protestant does pray that all proceedings before the Land Department, looking to the allowance of mineral entry upon said application for patent for the said pretended Blank Lode mining claim, or the issuance of patent for the same, be suspended as provided by Section 2326 of the United States Revised Statutes, to the end that your protestant may secure a determination of its adverse claim and right in a court of competent jurisdiction, in accordance with the statute for such cases made and provided.

And for further cause of protest against the application for patent for said pretended Blank Lode mining claim, your protestant alleges that neither the applicant for said Blank Lode claim nor his grantor have ever made a legal discovery upon said claim of a vein or lode of mineral-bearing rock in place.

THE FREE SILVER MINING COMPANY,
By William Jones, its Agent.

State of Colorado, } ss.
County of El Paso. }

Subscribed and sworn to before me this first day of June, A. D. 1896.

[Seal.] RICHARD JONES,
Notary Public.

4—654.

RECEIVER'S RECEIPT.

Adverse Claim.

(Original to be immediately forwarded to General Land Office. Duplicate to be given adverse claimant.)

Adverse Claim No. ..... }
Filed against }
Mineral Application No ..... }

UNITED STATES LAND OFFICE,
at.....
....., 189..

Received from ....
....

the sum of ten dollars, being the fee of five dollars payable to the Register and five dollars payable to the Receiver, under paragraph 9 of Section 2238, United States Revised Statutes, for filing and acting upon adverse claim No. ....., by claimant.. of the ....mining claim.., against mineral application No. ....., filed by .... for the .... mining claim.. ....

Receiver.

REGISTER'S CERTIFICATE OF POSTING NOTICE FOR SIXTY DAYS.

United States Land Office at ....., ..., 18.....

I hereby certify that the official plat of the .... lode, designated by the Surveyor General as lot No. ....., was filed in this office on the ..... day of ....., A. D. 18...., and that a notice, of which the attached notice is a copy, of the intention of .... to apply for a patent for the mining claim or premises embraced by said plat, and described in the field notes of survey thereof filed in said application, was posted conspicuously in this office on the ..... day of ....., A. D. 18...., and remained so posted until the ..... day of ....., A. D. 18...., being the full period of sixty consecutive days during the period of publication as required by law; and that said plat remained in this office during that time, subject to examination, and that no adverse claim thereto has been filed.

....

Register.

APPLICATION TO PURCHASE.

To the Register and Receiver of United States Land Office at .....,.....:

The undersigned claimant, under the provisions of the Revised Statutes of the United States, Chapter six, Title thirty-two, and legislation supplemental thereto, hereby applies to purchase that mining claim known as the ....., in Section ....., in township No. ..... of range No. ....., ... meridian, designated as lot No. ....., said lot No. ..... extending ..... feet in length along said ..... vein or lode, but expressly excepting and excluding from this application all that portion of the ground embraced in mining claim or survey designated as lot No. .....; and also all that portion of any vein or lode the top or apex of which lies inside of said excluded ground; said lode ..... claim embracing ..... acres and said mill site claim ..... acres, in the ..... Mining District, in the County of ..... and ..... of ....., as shown by the survey thereof, and hereby agrees to pay therefor ..... dollars, being the legal price thereof.

....

Dated ....., 18.....

I, ..., register of the Land Office at ....., do hereby certify that the aforesaid mining claim or lot No. ....., as applied for above, is subject to entry by the above-named applicant; the area of said lode ..... claim being ..... acres and of said mill site claim ..... acres, and the legal price thereof ..... dollars.

....
Register.

...., 18....

CERTIFICATE OF NO SUIT PENDING.

State of .....} ss. In the District Court.
County of .....}

I, ..., Clerk of the District Court of the ..... Judicial District of the

State of ....., within and for the County of ....., do hereby certify that I have made a careful search and find no suits have been brought or are now pending in said District Court against ....., ..., ..., or either of them, involving the title to the ..... lode mining claim (or either of them) situate in the .... Mining District, County of .... and State of ....., except case No. .., ... v. .....

All of which suits have been settled by judgment or dismissal, certified copies of which said judgments or dismissals are hereto attached and marked Ex. "A" to "....." inclusive.

In testimony whereof I have hereunto set my hand and the seal of said Court at ....., County and State aforesaid, this ..... day of ....., 18...., at ..... o'clock .....

....,
[Seal.] Clerk.

By ....,
Deputy.

CERTIFICATE OF NO SUIT BROUGHT OR PENDING.

I, ..., Clerk of the United States Circuit Court for the District of ....., do hereby certify that I have made a careful search, and find no suit has been commenced or is now pending and undecided in said Court at ....., wherein ..... is defendant involving the title to the ..... mining claim, or either of them in ..... Mining District, ... County and State of .....

In testimony to the above I do hereunto sign my name and affix the seal of said Court at ..... in said District, this ..... day of ....., 18....

....,
[Seal.] Clerk.

RECEIVER'S RECEIPT.

(Duplicate to be Given the Purchaser.)

Mineral Entry No. ..... }
Lot No. ..... }

United States Land Office at .....,
....., 18....

Received from .... the sum of ..... dollars, the same being payment in full for the area embraced in that mining claim known as the ....., in Section ....., in township No. ..... of range No. ....., ... meridian, designated as lot No. ....., said lot No. ..... extending ..... feet in length along said ..... vein, or lode, expressly excepting and excluding from this sale and entry all that portion of the ground embraced in mining claim or survey designated as lot No. .....; and also all that portion of any vein or lode the top or apex of which lies inside of said excluded ground; said lode ..... claim as entered embracing ..... acres and said mill site claim ..... acres, in the ..... Mining District, in the County of ..... and ..... of ....., as shown by the survey thereof.

....,
Receiver.

REGISTER'S FINAL CERTIFICATE OF ENTRY.

Mineral Entry No. .... }
Lot No. ..... }

United States Land Office at .....,
....., 18....

It is hereby certified that, in pursuance of the provisions of the Revised Statutes, Chapter six, Title thirty-two, and legislation supplemental thereto, ...
....., ..., whose postoffice address is ....., on this day purchased that mining claim known as the ....., in Section .....,

in township No. ..... of range No. ....., ... meridian, designated as lot No. ....., said lot No. ..... extending ..... feet in length along said ..... vein or lode, expressly excepting and excluding from said purchase all that portion of the ground embraced in mining claim or survey designated as lot No. .....; and also all that portion of any vein or lode the top or apex of which lies inside of said excluded ground; said lode ..... claim, as entered, embracing ..... acres, and said mill site claim ..... acres, in the ..... Mining District, in the County of ..... and ..... of ....., as shown by the plat and field notes of survey thereof, for which the said party first above named this day made payment to the receiver in full, amounting to the sum of ..... dollars.

Now, therefore, be it known that upon the presentation of this certificate to the Commissioner of the General Land Office, together with the plat and field notes of survey of said claim and the proofs required by law, a patent shall issue thereupon to the said ...., if all be found regular.

....,
Register.

PATENT FOR LODE CLAIM.

General Land Office No. .....

Mineral Certificate No. .....

The United States of America, To all to whom these Presents shall come, Greeting:

Whereas, in pursuance of the provisions of the Revised Statutes of the United States, Chapter six, Title thirty-two, and legislation supplemental thereto, there have been deposited in the General Land Office of the United States the plat and field notes of survey and the certificate, No. ....., of the register of the Land Office at ....., in the ..... of ...., accompanied by other evidence, whereby it appears that .... did, on the ..... day of ....., A. D. 18...., duly enter and pay for that certain mining claim or premises known as the ....., designated by

the Surveyor General as lot No. ....., in the .... Mining District, in the County of ..... and ..... of ....., in the district of lands subject to sale at ....., and bounded, described and platted as follows, with magnetic variation ....:

Beginning ..... (Here follows a description of the claim.)

Now know ye, that there is therefore hereby granted by the United States unto the said .... and to .... and assigns, the said mining premises hereinbefore described, and not expressly excepted from these presents, and all that portion of the said ..... vein, lode or ledge, and of all other veins, lodes and ledges, throughout their entire depth, the tops or apexes of which lie inside of the surface boundary lines of said granted premises in said lot No. ....., extended downward vertically, although such veins, lodes or ledges in their downward course may so far depart from a perpendicular as to extend outside the vertical side lines of said premises: Provided, that the right of possession to such outside parts of said veins, lodes or ledges shall be confined to such portions thereof as lie between vertical planes drawn downward through the end lines of said lot No. ....., so continued in their own direction that such planes will intersect such exterior parts of said veins, lodes or ledges: And provided further, that nothing herein contained shall authorize the grantee herein to enter upon the surface of a claim owned or possessed by another.

To have and to hold said mining premises, together with all the rights, privileges, immunities and appurtenances of whatever nature thereunto belonging, unto the said grantee above named, and to .... and assigns forever, subject nevertheless to the above-mentioned and the following conditions and stipulations:

First. That the premises hereby granted, with the exception of the surface, may be entered by the proprietor of any other vein, lode or ledge the top or apex of which lies outside of the boundary of said granted premises, should the same in its dip be found to penetrate, intersect or extend into said premises,

for the purpose of extracting and removing the ore from such other vein, lode or ledge.

Second. That the premises hereby granted shall be held subject to any vested and accrued water rights for mining, agricultural, manufacturing or other purposes, and rights to ditches and reservoirs used in connection with such water rights as may be recognized and acknowledged by the local laws, customs and decisions of courts. And there is reserved from the lands hereby granted, a right of way thereon for ditches or canals constructed by the authority of the United States.

Third. That in the absence of necessary legislation by Congress, the legislature of ..... may provide rules for working the mining claim or premises hereby granted, involving easements, drainage and other necessary means to its complete development.

In testimony whereof, I, ..., President of the United States of America, have caused these letters to be made patent, and the seal of the General Land Office to be hereunto affixed.

Given under my hand, at the city of Washington, the ..... day of ....., in the year of our Lord one thousand eight hundred and ninety....., and of the independence of the United States the one hundred and .....

By the President: ....

By ....,

Secretary.

....,

Recorder of the General Land Office.

Recorded vol. ....., pages ..... to ....., inclusive.

PATENT FOR PLACER WITH INCLUDED LODE.

General Land Office No. .....

Mineral Certificate No. .....

The United States of America, To all to whom these Presents shall come, Greeting:

Whereas, in pursuance of the provisions of the Revised Statutes of the United States, Chapter six, Title thirty-two, and legislation supplemental thereto, there have been deposited in the General Land Office of the

United States the plat and field notes of survey, and the certificate, No. ....., of the register of the land office at ....., in the ..... of ....., accompanied by other evidence, whereby it appears that .... did, on the ..... day of ....., A. D. 18.., duly enter and pay for that certain placer mining claim and premises, designated by the Surveyor General as lot No. ....., in the ..... Mining District, in the county of ..... and ..... of ....., in the district of lands subject to sale at ....., and bounded, described and platted as follows, with magnetic variation .....:

Beginning ..... [Here follows a description of the placer claim and of the lode according to the official survey.]

Now know ye, that there is therefore hereby granted by the United States unto the said ...., and to .... and assigns, the said mining premises hereinbefore described, and not expressly excepted from these presents, with all that portion of the said ..... vein, lode or ledge, and of all other veins, lodes and ledges, through their entire depth, the tops or apexes of which lie inside of the surface boundary lines of said ..... lode claims in said lot No. ...., extended downward vertically, although such veins, lodes or ledges in their downward course may so far depart from a perpendicular as to extend outside the vertical side lines of said ..... lode claim: Provided, that the right of possession to such outside parts of said veins, lodes or ledges shall be confined to such portions thereof as lie between vertical planes drawn downward through the end lines of said ..... lode claim, so continued in their own direction that such planes will intersect such exterior parts of said veins, lodes or ledges: And provided further, that nothing herein contained shall authorize the grantee herein to enter upon the surface of a claim owned or possessed by another.

To have and to hold said mining premises, together with all the rights, privileges, immunities and appurtenances of whatsoever nature thereunto belonging, unto the said grantee above named, and to .... and assigns forever; subject nevertheless to the above-mentioned and to the following conditions and stipulations:

First. That the said ..... lode claim hereby granted, with the exception of the surface, may be entered by the proprietor of any other vein, lode or ledge, the top or apex of which lies outside of the boundary of such granted premises, should the same in its dip be found to penetrate, intersect or extend into said premises, for the purpose of extracting and removing the ore from such other vein, lode or ledge.

Second. That the grant of the placer mining ground hereby made is restricted in its exterior limits to the boundaries thereof, and to any veins or lodes of quartz or other rock in place bearing gold, silver, cinnabar, lead, tin, copper, or other valuable deposits, which may have been discovered within said limits subsequent to and which were known to exist on the ..... day of ....., A. D. 18....

Third. That should said vein or lode of quartz or other rock in place bearing gold, silver, cinnabar, lead, tin, copper, or other valuable deposits, be claimed or known to exist within the above-described placer mining ground at said last-named date, the same is expressly excepted and excluded from these presents.

Fourth. That the placer mining ground hereby conveyed may be entered by the proprietor of any vein or lode of quartz or other rock in place bearing gold, silver, cinnabar, lead, tin, copper, or other valuable deposits, for the purpose of extracting and removing the ore from such vein or lode, should the same, or any part thereof, be found to penetrate, intersect, pass through or dip into the mining ground or premises hereby granted.

Fifth. That the premises hereby conveyed shall be held subject to any vested and accrued water rights for mining, agricultural, manufacturing, or other purposes, and rights to ditches and reservoirs used in connection with such water rights as may be recognized and acknowledged by the local laws, customs and decisions of courts.

Sixth. That in the absence of necessary legislation by Congress, the legislature of ..... may provide rules for working the mining claim or premises hereby granted, involving easements, drainage, and other necessary means to the complete development thereof.

In testimony whereof, I, ..., President of the United States of America, have caused these

letters to be made patent, and the seal of the General Land Office to be hereunto affixed.

Given under my hand, at the city of Washington, the ..... day of ....., in the year of our Lord one thousand eight hundred and ....., and of the independence of the United States the one hundred and .....

[Seal.] By the President: ....

By ....,

Secretary.

....,

Recorder of the General Land Office.

Recorded, vol. ....., pages ..... to ..... inclusive.

PATENT FOR PLACER TAKEN BY MINERAL SURVEY.

General Land Office No. .....

Mineral Certificate No. .....

The United States of America, To all to whom these Presents shall come, Greeting:

Whereas, in pursuance of the provisions of the Revised Statutes of the United States, Chapter six, Title thirty-two, and legislation supplemental thereto, there have been deposited in the General Land Office of the United States the plat and field notes of survey and the certificate, No. ....., of the register of the land office at ....., in the ..... of ....., accompanied by other evidence, whereby it appears that .... did, on the ..... day of ....., A. D. 18...., duly enter and pay for that certain placer mining claim and premises, designated by the Surveyor General as lot No. ....., in the ..... Mining District, in the county of ..... and ..... of ....., in the district of lands subject to sale at ....., and bounded and described and platted as follows, with magnetic variation .....:

Beginning ..... [Here follows description of the claim.]

Now know ye, that there is therefore hereby granted by the United States unto the said .... and to .... and assigns, the said placer mining premises hereinbefore described.

To have and to hold said mining premises, together with all the rights, privileges, immunities and appurtenances of whatsoever nature thereunto belonging, unto the said grantee above named, and to .... and assigns forever; subject nevertheless to the following conditions and stipulations:

First. That the grant hereby made is restricted in its exterior limits to the boundaries of the said mining premises, and to any veins or lodes of quartz or other rock in place bearing gold, silver, cinnabar, lead, tin, copper, or other valuable deposits, which may have been discovered within said limits subsequent to and which were not known to exist on the ..... day of ....., A. D. 18....

Second. That should any vein or lode of quartz or other rock in place bearing gold, silver, cinnabar, lead, tin, copper, or other valuable deposits, be claimed or known to exist within the above-described premises at said last-named date, the same is expressly excepted and excluded from these presents.

Third. That the premises hereby conveyed may be entered by the proprietor of any vein or lode of quartz or other rock in place bearing gold, silver, cinnabar, lead, tin, copper, or other valuable deposits, for the purpose of extracting and removing the ore from such vein or lode, should the same, or any part thereof, be found to penetrate, intersect, pass through or dip into the mining ground or premises hereby granted.

Fourth. That the premises hereby conveyed shall be held subject to any vested and accrued water rights for mining, agricultural, manufacturing or other purposes, and rights to ditches and reservoirs used in connection with such water rights as may be recognized and acknowledged by the local laws, customs and decisions of courts. And there is reserved from the lands hereby granted a right of way thereon for ditches or canals constructed by authority of the United States.

Fifth. That in the absence of necessary legislation by Congress, the legislature of ..... may provide rules for working the mining claim or premises hereby granted, involving easements, drainage and other necessary means to complete development thereof.

In testimony whereof, I, ..., President of the United States of America, have caused these

letters to be made patent, and the seal of the General Land Office to be hereunto affixed.

Given under my hand, at the city of Washington, the ..... day of ....., in the year of our Lord one thousand eight hundred and ninety....., and of the independence of the United States the one hundred and .....

By the President: ....

By ....,

Secretary.

....,

Recorder of the General Land Office.

Recorded, vol. ....., pages ..... to ....., inclusive.

PATENT FOR PLACER TAKEN BY LEGAL SUBDIVISIONS.

(First page only. Remainder of patent is identical with latter portion of preceding placer patent.)

General Land Office No. .....

Mineral Certificate No. .....

The United States of America, To all to whom these Presents shall come, Greeting:

Whereas, in pursuance of the provisions of the Revised Statutes of the United States, Chapter six, Title thirty-two, and legislation supplemental thereto, there has been deposited in the General Land Office of the United States the certificate, No. ....., of the register of the land office at ....., in the ..... of ....., accompanied by other evidence, whereby it appears that ..... did, on the ..... day of ....., A. D. 18...., duly enter and pay for that certain placer mining claim and premises [here follows description of the claim by legal subdivisions].

PATENT FOR MILL SITE.

General Land Office No. .....

Mineral Certificate No. .....

The United States of America, To all to whom these Presents shall come, Greeting:

Whereas, in pursuance of the provisions of the Revised Statutes of the United States, Chapter six, Title

thirty-two [here follow recital of entry of the land, with a description of the land in accordance with the official survey thereof].

Now know ye, that the United States of America, in consideration of the premises and in conformity with said Revised Statutes of the United States, have given and granted, and by these presents do give and grant, unto the said .... and to .... and assigns, the said premises above described as lot No. ....., with the exclusive right of possession and enjoyment of all the land included within the exterior lines of said survey not herein expressly excepted from these presents.

To have and to hold said mill site or premises, together with all the rights, privileges, immunities and appurtenances of whatever nature thereunto belonging, unto the said .... and to .... and assigns forever, subject nevertheless to the following conditions and stipulations:

First. That the premises hereby conveyed may be entered by the proprietor of any vein or lode of quartz, or other rock in place, bearing gold, silver, cinnabar, lead, tin, copper, or other valuable deposits, for the purpose of extracting and removing the ore from such vein, lode or deposit, should the same or any part thereof be found to penetrate, intersect, pass through or dip into the premises hereby granted.

Second. That the premises hereby conveyed shall be held subject to any vested and accrued water rights for mining, agricultural, manufacturing, or other purposes, and rights to ditches and reservoirs used in connection with such water rights as may be recognized and acknowledged by the local laws, customs, and decisions of courts.

Third. That in the absence of necessary legislation by Congress, the legislature of ..... may provide rules for working the mining claim or premises hereby granted, involving easements, drainage and other necessary means to the complete development thereof.

In testimony whereof, I, ..., President of the United States of America, have caused these letters to be made patent, and the seal of the General Land Office to be hereunto affixed.

Given under my hand, at the city of Washington, the ..... day of ....., in the year of our Lord one

thousand eight hundred and ....., and of the independence of the United States the one hundred and .....

By the President: ....

By ....,

Secretary.

....,

Recorder of the General Land Office.

Recorded, vol. ....., pages ..... to ....., inclusive.

COAL PATENT.

General Land Office No. .....

Coal Certificate No. .....

The United States of America, To all to whom these Presents shall come, Greeting:

Whereas, in pursuance of the Revised Statutes of the United States, there has been deposited in the General Land Office of the United States the certificate of the register of the land office at ....., in the ..... of ....., whereby it appears that .... did, on the ..... day of ....., A. D. 18...., enter and pay for the ....., embracing ..... acres of land, more or less, as shown by the official plat of the survey of said land returned to the General Land Office by the Surveyor General; the same being coal entry No. ..... in the ..... series of said office.

Now know ye, that the United States of America, in consideration of the premises, and in conformity with said act of Congress, have given and granted, and by these presents do give and grant, unto the said .... and to ...., the said tract above described: To have and to hold the same, together with all the rights, privileges, immunities and appurtenances of whatsoever nature thereunto belonging, unto the said .... and to .... and assigns forever; subject to any vested and accrued water rights for mining, agricultural, manufacturing or other purposes, and rights to ditches and reservoirs used in connection with such water rights as may be recognized and acknowledged by the local customs, laws and decisions of courts, and also subject to the right of the proprietor of a vein or

lode to extract and remove his ore therefrom, should the same be found to penetrate or intersect the premises hereby granted, as provided by law. And there is reserved from the lands hereby granted, a right of way thereon for ditches or canals constructed by the authority of the United States.

In testimony whereof, I, ..., President of the United States of America, have caused these letters to be made patent, and the seal of the General Land Office to be hereunto affixed.

Given under my hand, at the city of Washington, the ..... day of ....., in the year of our Lord one thousand eight hundred and ninety....., and of the independence of the United States the one hundred and .....

By the President: ....

By ....,

Secretary.

....,

Recorder of the General Land Office.

Recorded, vol. ....., page .....

AFFIDAVIT OF LOSS OF DUPLICATE RECEIPT.

In the matter of Mineral Entry No. 777, ... Land District, for the Blank Lode claim.

State of Colorado, } ss.
County of El Paso. }

John Smith, being first duly sworn according to law, deposes and says that he is the identical person who, on the ..... day of ....., A. D. 1896, made mineral entry No. 777, in the ..... land office, for the Blank Lode mining claim.

That affiant has lost the receiver's duplicate receipt issued to him at the date of said mineral entry, and is wholly unable to find the same, though he has made diligent search therefor.

That affiant is the present owner of said Blank Lode mining claim, not having sold the same since the date of said mineral entry.

Wherefore, affiant asks that the United States patent issued upon said mineral entry be delivered to him.

JOHN SMITH.

Subscribed and sworn to before me, a notary public, this eleventh day of April, A. D. 1896.

[Seal.] RICHARD JONES,
Notary Public.

Note.—If affiant claims as transferee of the entryman, the fact should be briefly stated, showing loss of receipt either by his grantor or by affiant, and alleging affiant to be the present owner of the claim.

MINING QUIT-CLAIM DEED.

This indenture, made the ..... day of ....., in the year of our Lord one thousand eight hundred and ....., between John Smith, of the County of ..... and State of ....., party of the first part, and Henry White, of the County of ..... and State of ....., party of the second part:

Witnesseth, that the said party of the first part, for and in consideration of the sum of ..... dollars, lawful money of the United States of America, to him in hand paid by the said party of the second part, the receipt whereof is hereby acknowledged, has granted, bargained, sold, remised, released and forever quit-claimed, and by these presents do.. grant, bargain, sell, remise, release and forever quit-claim unto the said party of the second part, and to ..... (his) ..... heirs and assigns, all the following mining property, situate, lying, and being in ..... Mining District, ... County, and State of ....., to wit:

All interest, (or an undivided ..... interest) in, and to the ..... mining claim, (mineral survey No. 7777,) described as follows:

(Describe the claim by metes and bounds and with reference to neighboring claims, prominent objects, etc.)

Together with all the dips, spurs, and angles, and also all the metals, ores, gold and silver-bearing quartz, rock and earth therein, and all the rights, privileges and franchises thereto incident, appendant and appurtenant, or therewith usually had and enjoyed; and also, all and singular the tenements, hereditaments and appurtenances thereto belonging or in anywise appertaining, and the rents, issues and profits thereof, and also all the estate, right, title, interest, property,

possession, claim and demand whatsoever, as well in law as in equity, of the said party of the first part, of, in, or to the said premises, and every part and parcel thereof, with the appurtenances:

To have and to hold all and singular the said premises, together with the appurtenances and privileges thereto incident, unto the said party of the second part, ... (his) ..... heirs and assigns forever.

In witness whereof, the said party of the first part has hereunto set his hand and seal the day and year first above written.

JOHN SMITH.

Signed, Sealed and Delivered in the presence of

.....

.....

State of ..... } ss.
County of ..... }

I, ..., in and for said County, in the State aforesaid, do hereby certify that John Smith, personally known to me to be the person whose name is subscribed to the annexed deed, appeared before me this day in person, and acknowledged that he signed, sealed, and delivered the said instrument of writing as his free and voluntary act, for the uses and purposes therein set forth.

Given under my hand and ..... seal this ..... day of ....., A. D. 18....

(Note.—This deed should be recorded in the office of the mining recorder if the land is not situated in an organized county.)

PROOF OF OWNERSHIP AND POSSESSION IN THE CASE OF ABSENCE, LOSS OR DESTRUCTION OF MINING RECORDS.

State of ..... } ss.
County of ..... }

....., being duly sworn, deposes and says that he is the owner (or agent of the owner) of the ..... mining claim, situate in the ..... Mining District, County of ....., and State of .....; that said

claim was located (here state date of location as nearly as practicable) and since the date of such location has been continuously held and exclusively possessed by claimant or his grantors, and predecessors in interest; that such possession has been open, notorious, and undisputed; that the facts relative to the location and possession of said claim are, as far as known to deponent, substantially as follows: (If no record was made of location and transfers, so state; if record was made, but has been lost or destroyed, state cause and time of such loss or destruction. If possession has at any time been the subject of litigation, so state, and furnish proper evidence of termination thereof.)

That such possession of affiant and his grantors has been maintained for the period of ..... years up to the present time, which period is longer than that prescribed by the Statute of Limitations of the State of ....., governing title to mining claims.

In support of this affidavit, a certified copy of said Statute of Limitations is herewith filed, and made a part hereof.

.....

Subscribed and sworn to before me this ..... day of ....., 18....

.....

(Note.—This affidavit should be corroborated by two witnesses if possible, and be accompanied by any evidence, documentary or otherwise, tending to show possessory title in the claimant.)

GRUB STAKE CONTRACT.

State of .....} ss.
County of .....}

Witness this memorandum of agreement made this ..... day of ....., 18.., between ..... of ....., party of the first part and ..... of ....., party of the second part; that said party of the first part agrees to diligently prospect for the term of ..... (days or months) from this date, for mineral-bearing veins, lodes, ledges, or deposits upon the public domain and to make locations of mining claims upon any such veins, lodes, ledges, or deposits, as may be by him discovered as the result of such prospecting, which

locations shall be made in the joint names of the parties to this agreement and in the names of none others; and that he will not during the continuance of this contract prospect on his own account nor on the account of persons other than the parties to this contract; and that he will report at least once in every ..... to the party of the second part, stating in full the results of such prospecting; and that he will contract no debts in the prosecution of said prospecting on account of the party of the second part.

That said party of the second part hereby agrees to furnish to the said party of the first part a complete miner's outfit for use in such prospecting and to supply said party of the first part, from time to time, as may be required, with such sums of money, provisions or supplies, for the use of said party of the first part, as may be necessary, and to defray all expenses incident to the maintenance of possession of any mining claims which may be located in pursuance of the terms of this agreement or in the securing of patent for such claims.

Witness our signatures this ..... day of .....

.....

.....

Witnesses to signatures:

.....

.....

POWER OF ATTORNEY TO CONVEY.

State of ..... } ss.
County of ..... }

KNOW ALL MEN BY THESE PRESENTS, That I, ... of ..... have made and appointed, and do hereby make and appoint ..... of ....., my true and lawful attorney-in-fact, for me and in my name, place and stead to convey by quit-claim deed all my right, title, interest, or claim in and to that certain ..... mining claim known as the ..... mining claim, situated in the ..... Mining District, County of ....., and State of .....

Giving and granting unto my said attorney full power and authority to do and perform all acts and things whatsoever requisite and necessary to be done in the premises, hereby ratifying all such acts and

things which my said attorney shall lawfully do by virtue of this power of attorney.

Witness my hand and seal this ..... day of ....., A. D. 18....

.....

(Acknowledgment before officer authorized to take same.)

GLOSSARY OF MINING TERMS.

ADIT—A horizontal entrance into a mine.

ADVERSE—1. To oppose the issuance of patent to a mining claim.

2. The papers filed in the land office setting forth adverse rights.

ALLIGATOR—A machine for breaking rocks, working by jaws.

ALLUVIUM—Soil deposited by the action of water.

AMALGAM—A compound of mercury with some other metal.

ANTICLINAL—An upward fold of strata. The opposite of synclinal.

APEX—That end or edge of a vein at or nearest the surface of the earth. See p. 51.

ARASTRA—A primitive machine for crushing rock or ore.

ARGENTIFEROUS—Carrying silver.

ASSAY—A chemical test of ore to determine the presence or quantity of certain metals.

ASSESSMENT WORK—The work or expenditure required by law to be performed or made annually upon or for the benefit of a mining claim to preserve a possessory title.

AURIFEROUS—Carrying gold.

BACK—Roof of an underground working, as an adit, drift, or stope.

BAR DIGGING—Placer working on a river bar during low water or with the aid of a dam.

BARREN—Devoid of mineral,

BATTERY—A set of stamps (generally five) falling in one mortar.

BED ROCK—Solid rock, which may crop out on the surface, but which generally underlies alluvium, gravel or formations near the surface. Underlying country rock.

BLACK SAND—Grains of magnetic iron ore, with which placer gold is usually found.

BLIND LODE—A vein or lode without a surface outcrop.

BLOSSOM (COAL)—A decomposed coal outcrop; also called smut.

BLOW OUT—1. An outcrop spreading at the surface.

2. A blast "blows out" when it exerts only an outward force without shattering the surrounding rock.

BONANZA—An unusually rich body of ore. Opposed to Borraska.

BOULDER or BOWLDER—A rock that has been transported by natural agencies from its original place. Frequently rounded by action of water.

BREAST—Head of an adit, tunnel, drift or underground horizontal working; the face being the entrance.

BRECCIA—A rock composed of angular fragments united by cement.

BULKHEAD—A tight partition.

BURNING—Melting of frozen placer ground, in order that it may be excavated. Used in Alaska and Klondike regions.

CACHE—An explorer's or prospector's hiding place or deposit of supplies.

CAGE—The car or box of a mine elevator.

CEMENT—Gravel held in a solid mass by silicious matter.

CHIMNEY—See Chute.

CHLORINATION PROCESS—"A method of separating gold from quartz and arsenical or common pyrites, as well as from various residua obtained in metallurgical operations. * * The process is based upon the power possessed by chlorin gas of transforming

metallic gold into a chlorid, in which condition it can easily be dissolved out by water, and afterward precipitated into the metallic form."

"Extensively used for separating gold from silver. It is based upon the fact that gold at a red heat has no affinity for chlorin, the chlorid of gold being reduced to the metallic state by heat alone, while this is not true of the metals with which gold is usually alloyed."—Century Dict.

CHUTE—(Ore.) An elongated body of ore within a vein—richer part of a vein. Sometimes called a chimney or pipe.

CINNABAR—Red sulphuret of mercury. Quicksilver ore.

CLAIM—A tract of mineral land held by virtue of compliance with Federal and local laws. It may comprise one or more locations. See p. 66.

CLEAN-UP—Collection of mineral from a milling or placer-mining operation. Product of such operations.

CLEAVAGE—Quality of splitting or dividing in certain well defined directions. Lamination.

CLINOMETER—An instrument for measuring the dip of mineral strata, consisting generally of a pendulum, spirit-level, and scale of angles.

COLLAR—Timbering at mouth of a shaft to prevent caving.

COLOR—A speck or particle of gold left in a pan after washing of gravel, sand, or pulverized rock.

CONCENTRATION—Mechanical removal of the less valuable parts of ores.

CONGLOMERATE—A mass of cemented stones, pebbles, or fragments of rock.

CONTACT (VEIN)—A vein lying between two strata of dissimilar rock—between two formations.

COPPER-PLATES—Plates of copper over which auriferous slimes flow from a stamp-battery, upon which the gold is caught by quicksilver.

COUNTRY ROCK—Non-mineralized mass of rock, adjacent to or traversed by a mineral deposit or vein.

COURSE (OF VEIN)—Its horizontal direction as distinguished from its inclination or dip; also termed its

strike. Example. The course of a vein may be north and south and its dip easterly or westerly.

COYOTING—Surface mining, without general system.

CRAB—Form of crane used for moving heavy weights.

CRADLE—See Rocker.

CRIBBING—Close timbering as lining for a shaft or to support the roof of an underground working.

CROPPING—Surface indication of a vein.

CROSS COURSE—A small vein, generally barren, intersecting a larger or principal one. Not synonymous with Cross Vein.

CROSS CUT—A level driven across the course of a vein, as distinguished from a drift along the vein.

CROSS VEIN—Intersecting lode or vein.

CURB—A frame placed within or at the mouth of a shaft to prevent caving.

CUT—1. To intersect or penetrate a vein.
2. A surface excavation generally of greater length and depth than width.

CYANIDE—A combination of cyanogen with a metallic base.

DAM—Any structure to obstruct the flow, or change the course of water.

DEAD WORK—Unproductive work necessary to the development of a mine.

DEBRIS—Broken and detached rock—refuse matter.

DEPOSIT—A body of mineral not in place, as in the form of nuggets or pockets.

DIAMOND-DRILL—A rock drill with black diamonds set in the head.

DIKE, or DYKE—A wall-like mass of mineralized matter, usually an intrusion of igneous rock, filling up fissures in the original formation.

DILUVIUM—A superficial deposit of loam, sand, gravel, etc., caused by action of water.

DIP—The inclination of a vein from a perpendicular, measured in degrees. The general direction of such inclination, as, the dip of a vein, the strike of which is

north and south, will generally be to the east or west. See p. 52 for diagram.

DRIFT—An underground horizontal passage, generally driven along the course of the vein.

DRILL—A metallic tool for boring in rock.

DRIVING—A horizontal extension of an excavation, as distinguished from sinking or raising.

DUMP—A deposit or place of deposit of material taken from a mine.

EXPLOITATION—Working or development of a mine.

FACE—The open end of a tunnel or drift.

FAN—A blower to force air in or out of a mine.

FAULT—A break in the continuity of a vein or stratum.

FEEDER—A small vein leading to a larger one.

FERRUGINOUS—Containing iron.

FISSURE—A cleft or crack in a geological formation. The matter filling it is called a vein.

FLASK—An iron receptacle for holding quicksilver, containing 76½ pounds.

FLOAT—Pieces of rock or ore detached from their formation or veins.

FLOUR GOLD—Exceedingly fine gold.

FLUME—A pipe or trough for conducting water for mining or other operations.

FLUX—Any substance used to promote the fusion of metals or minerals.

FOOT-WALL—See Wall.

FORFEITURE—The loss of possessory title to or in a mining claim either (1) by failure to perform required annual labor on the claim, such failure being followed by relocation by third persons; or (2) by failure on the part of a tenant in common to contribute to his co-tenant his proportion of the expense incurred in complying with law in this respect.

FORMATION—A series of rock or strata. Used also in speaking of their general characteristics, as, limestone formation.

FREE-MILLING—"Easily reduced; said of aurif-

erous and argentiferous ores which are reducible without previous roasting."—Century Dict.

FUSE—A tape or ribbon filled or saturated with combustible matter and used in exploding a charge or blast.

GANGUE—That part of a vein surrounding the metallic ore.

GASH VEIN—A small narrowing seam of quartz or other rock.

GRUB STAKE—A contract whereby one person furnishes supplies, etc., to a prospector for an interest in any mineral deposit that may be found.

HANGING WALL—See Wall.

HORSE—A mass of country-rock enclosed in a vein.

HYDRAULIC—That method of placer mining in which the force of a stream of water, passing through a nozzle under high pressure, is employed to disintegrate auriferous earth or gravel, and wash the same into sluice boxes where the gold is caught.

IMPREGNATION—A mineralized body of rock without definite boundaries; distinguished from "deposit" or "segregation," the boundaries of which are determinable.

INCLINE—A shaft or underground passage way at an angle to the plane of the horizon.

IN PLACE—A vein of ore in position as originally formed in a fissure or between different formations.

JUMP—1. A dislocation in a mineral stratum—a fault.

2. To relocate the claim of another with or without right.

LAGGING—Small timbers placed behind stulls or uprights to prevent falling or caving of rock or earth, or in stoping, placed upon the stulls.

LEAD—See Vein.

LEADER—A small vein leading to a larger one.

LEDGE—See Vein.

LEVEL—A horizontal passage from a shaft. Generally applied where there are several such passages

at different altitudes, the first level being that nearest the surface.

LIFT—The difference in altitude between two horizontal passages in a mine. Sometimes used to denote the upward dislocation of a vein.

LOCATION—1. The appropriation, according to law, of a parcel of land as a mining claim.

2. Sometimes used as synonymous with "claim."

LODE—See Vein.

LONG-TOM—See Rocker.

MASSIVE—A non-stratified formation.

MATRIX—See Gangue.

MERCURY—Sulphide of cinnabar—quicksilver. Used to catch gold, with which it readily amalgamates.

MILL RUN—The work of mills or reduction works between "clean-ups."

MILL TEST—An actual test of the value of ore by mill treatment, as distinguished from "assay," in which only samples are tested.

MINE—1. A subterranean cavity or passage for the excavation of metallic ores or mineral substances.

2. The tract or claim embraced in a location.

MINER'S INCH—The amount of water flowing at a certain head for a certain period through an aperture of one square inch. These factors vary in different localities.

MONITOR—A nozzle working on a universal joint, through which a stream of water is directed for hydraulic mining.

MONOCLINAL—A series of parallel strata.

MORTAR—Heavy iron vessel in which rock is crushed either by hand-pestles or stamps.

MOUTH—The open end of a shaft, passage, or underground excavation.

NUGGET—A lump or mass of mineral, generally applied to gold.

OPEN CUT—An excavation not entering cover.

ORE—The compound of a metal and some other substance. Metalliferous rock.

ORE CHUTE—See Chute.

ORE ZONE—A defined area of mineralized rock which may contain veins or deposits.

OUTCROP—Surface indications of a vein.

PAN—A shallow vessel for the washing of auriferous sand, gravel, or pulverized rock, for the extraction of gold.

PANNING—The extraction of minerals more especially gold, by use of water to wash away the lighter materials, the gold, being heavier, remaining at the bottom.

PAY ORE—That ore which is susceptible of profitble extraction and treatment.

PAY STREAK—That portion of a vein containing pay ore.

PETER or PETER OUT—A gradual diminution or failure in quantity or richness.

PINCH—A contraction or obliteration of a vein.

PITCH—See Dip.

PLACE—See In Place.

PLACER—A valuable deposit of mineral not in rock in place. See Sec. 2329, U. S. Rev. Stat.

POCKET—An isolated deposit of ore as distinguished from a continuous vein.

POWER DRILL—A drill propelled by the application generally of electricity or compressed air.

PROSPECT—1. Generally, to search for a mineral-bearing vein or deposit.
2. To investigate the value of same.
3. An undeveloped mine.

QUARTZ—A crystalline silica, often carrying metals.

QUARTZITE—Granular quartz.

RAISE—See Upraise.

REEF—The outcrop of a vein projecting above the surface.

REFRACTORY—Resisting ordinary treatment. Difficult of fusion or reduction.

RETORTING—Removal of quicksilver from amalgam by volatilization and condensation.

RIFFLES—An obstruction placed in a sluice for the purpose of catching gold as it is washed down. Quicksilver is frequently placed above the riffles, which usually consist of cross blocks.

RIM-ROCK—The upper edge of bed rock which forms the boundary of placer deposits.

ROASTING—Exposure of ores to heat for purpose of expelling sulphur, arsenic, etc., the substances to be expelled being volatilized by the heat.

ROB—To extract the minerals from a mine regardless of the condition in which it is left.

ROCK-DRILL—See Drill.

ROCKER—A small inclined trough, containing riffles and set on rockers, the gravel being washed through a screen at the upper end and thence over the riffles, which catch the gold, the trough being rocked or oscillated meanwhile.

ROYALTY—The owner's share in the proceeds of a mine.

SADDLE—The highest portion of an upward fold of stratum.

SALTING—The placing of ore or mineral in a mine for the fraudulent purpose of increasing its apparent value.

SAMPLING WORKS—Works for ascertaining the value of ores.

SEAM—A small mineralized crevice or fissure.

SEGREGATION—See Impregnation.

SELVEDGE—A thin layer of earthy matter between the wall and the vein.

SHAFT—A well-like excavation in the earth. If not perpendicular, it is termed an incline shaft.

SHEATHING—A close covering or lining of planks.

SHIFT—1. A miner's work for one day.
2. Those engaged in the work at one time, as night-shift, and day-shift.

SHOE—The piece of steel at the crushing end of a stamp; removable when worn out.

SHOOT—See Chute.

SLAG—Dross or waste left from smelted ore.

SLIDE—1. A vertical dislocation of a vein or formation.

2. The loose rock overlying the country formation.

SLIME—"Ore reduced to a very fine powder and held in suspension in water, so as to form a kind of thin ore-mud; generally used in the plural. In the slimes the ore is in a state of almost impalpable powder, so that it requires a long time for settling."

SLOPE—See Incline.

SLUICE—A ditch, box, or series of boxes containing riffles through which auriferous matter is washed, the gold settling behind the riffles.

SMELTING—With most ores, generally comprises several processes:

1. Calcination or roasting to expel the sulphur.
2. Reduction of the metal.
3. Refining or expelling all metals associated with those sought.

SPUR—An off-shoot or branch of a vein.

STAMP-MILL—"A crushing-mill employing stamps or pestles to crush ore or rock to powder preparatory to treatment for extracting metals. The stamps, which are often of great size and weight, are arranged in a row, and are usually raised by means of wipers or cams on a revolving shaft turned by steam or water-power. The cams release the stamps in turn, and they fall on the ore placed in chambers below, the sides of these chambers being perforated to allow the escape of the crushed material as soon as reduced to the required fineness, while a stream of water sweeps the slimes away as they are produced. Such a row of stamps is also called a stamp-battery."—Century Dict.

STEP-VEIN—A vein following a stratum of country-rock, then cutting through the next higher or lower stratum and following that, preserving its continuity.

STOPING—1. Excavation of ore rendered accessible by other workings.

2. OVERHAND-STOPING—Taking ore from the roof or upper side of an opening, the loosened rock falling to the floor or to the "lagging" supported on "stulls."

3. UNDERHAND STOPING—Taking ore from the floor of a working chamber. Not used where overhand stoping is feasible.

STRATUM—A bed of earth or rock.

STRIKE—See Course.

STRINGER—A small mineralized seam leading to a vein.

STRIP—To remove wash and surface rock from a vein.

STULLS—Heavy timbers secured in an underground working, generally in a stope. On the stulls rest the lagging, forming a platform, onto which the loosened rock falls.

SYNCLINAL—The downward fold of strata. The opposite of anticlinal.

TAILINGS—A refuse matter of stamped ore, or material which has been sluiced in placer mining.

TAMP—To tightly fill with earth the hole in which a blasting charge has been placed, in order to give rending force to the blast.

THROW—An upward or downward dislocation of a vein or stratum.

TRAM—A small car used for transporting ore or rock. Sometimes applied to the system of tracks and cars.

TUNNEL—An underground passage generally horizontal, and usually driven across the vein. From it drifts are run along the vein.

UNDER-HAND—Excavation from below. See Stoping.

UPCAST—A ventilating shaft with an ascending current of air.

UPRAISE—A shaft or winze excavated from below. The opposite of sinking.

UPTHROW—A raising or upheaval of strata.

VANNERS—Copper plates on which quicksilver is placed, and over which ore flows from a concentrator, the gold being caught by amalgamation with the quicksilver.

VANNING—The use of a shovel as a pan.

VEIN—1. A cleft or fissure filled with mineralized matter traversing a formation.

2. The space between two formations filled with such matter. In the latter case it is called a "contact" or "blanket" vein. See page 23 hereof for definitions by the courts.

WALL—1. The side of an underground horizontal working.

2. The rock within which the vein is inclosed.

HANGING-WALL—the country rock overlying a vein.

FOOT-WALL—the underlying boundary of a vein.

WASTE—Refuse matter.

WHIM OR WHIMSEY—A capstan or windlass worked by horse or steam-power for raising ore from a mine by means of a rope or cable.

WHIP—A simple rope and pulley for hoisting purposes worked by horse-power.

WINDLASS OR WINCH—A horizontal drum and crank worked by hand. Used for hoisting purposes.

WINZE—An interior shaft frequently connecting two levels.

WORKINGS—Surface or underground excavations for mining purposes.

ZONE—A mineralized belt.

PART IV.

ALASKA AND THE KLONDIKE.

The return within the past eighteen months of numbers of miners from the interior of Alaska and the adjoining British American Territory with large quantities of that metal for which men have risked their lives since history had its birth, has made familiar in every household the words "Alaska" and "Klondike," and the names of those cities of shingle palaces which have, as by magic, sprung from the obscurity of the site of less than a dozen houses to the dignity of cities so far as regards population and activity. While to many the words "Alaska" and "Klondike" are synonymous, and suggestive, alike of an undefined country at the extreme northwest corner of the western hemisphere, it is to be borne in mind that the Klondike region, so called, is that portion of the British Northwest Territory lying just to the east of the United States Territory of Alaska.

Alaska, as a geographical subdivision, comprises a peninsula extending from the northwest of this continent to the westward, separating the Pacific and Arctic Oceans and touching the coast of Siberia but for the comparatively narrow Behring Strait. Its westernmost Island, Attu, is some 1,500 miles west of the Hawaiian Islands, being in the Eastern Hemisphere. Its area is approximately 570,000 square miles, or, roughly speaking, two and one-half times as large as Texas, eight times as large as all of New England, and ten times the size of the State of Michigan.

The title of Russia to this American possession was based on its discovery and exploration by Behring, (after whom were named the straits separting Alaska from Siberia) a Russian subject, in 1741. In 1861 the United States began negotiations for the purchase of

what was then known as Russian America. On March 30, 1867, the treaty of cession was signed, the purchase price finally paid being $7,200,000. On May 28, 1867, the treaty was ratified and on June 20, 1867, was formally proclaimed by this government. (See 15 Statutes at Large 539 for proclamation and copy of treaty). The formal transfer of the territory was completed on October 26, 1867, by Commissioners Rousseau and Pestchouroff.

The distance of the Territory from even the Pacific States and the rigor of its climate have combined to render it a comparatively unknown country until within the past few years, and even now but little is known regarding any portion of it save the southeasterly portion, a few of the islands and that portion through which flows the river Yukon, larger than even the Mississippi, heretofore considered the "Father of Waters" of the continent.

Chief Moore of the Weather Bureau, under date of July 29, 1897, issued a bulletin on the climate of Alaska, as follows:

The general conception of Alaskan climate is largely due to those who follow the sea, and this is not strange when we consider the vast extent of shore line (over 26,000 miles) possessed by that territory. The climates of the coast and the interior are unlike in many respects, and the differences are intensified in this as perhaps in few other countries by exceptional physical conditions. The natural contrast between land and sea is here tremendously increased by the current of warm water that impinges on the coast of British Columbia, one branch flowing northward toward Sitka, and thence westward to the Kadiak and Shumagin islands. The fringe of islands that separates the mainland from the Pacific Ocean from Dixon Sound northward, and also a strip of the mainland for possibly 20 miles back from the sea, following the sweep of the coast as it curves to the northwestward to the western extremity of Alaska, form a distinct climatic division which may be termed temperate Alaska.

The temperature rarely falls to zero; winter does not set in until about December 1, and by the last of May the snow has disappeared except on the mountains. The mean winter temperature of Sitka is 32.5°,

but little less than that of Washington, D. C. While Sitka is fully exposed to the sea influence, places farther inland, but not over the coast range of mountains, as Killisnoo and Juneau, have also a mild temperature throughout the winter months. The temperature changes from month to month in temperate Alaska are small, not exceeding 25° from midwinter to midsummer. The average temperature of July, the warmest month of summer, rarely reaches 55°, and the highest temperature for a single day seldom reaches 75°.

The rainfall of temperate Alaska is notorious the world over not only as regards the quantity that falls, but also as to the manner of its falling, viz.: In long and incessant rains and drizzles. Cloud and fog naturally abound, there being on an average but 66 clear days in the year.

Alaska is a land of striking contrasts both in climate as well as topography. When the sun shines, the atmosphere is remarkably clear, the scenic effects are magnificent, all nature seems to be in holiday attire. But the scene may change very quickly; the sky becomes overcast; the winds increase in force; rain begins to fall; the evergreens sigh ominously, and utter desolation and loneliness prevail.

North of the Aleutian Islands the coast climate becomes more rigorous in winter, but in summer the difference is much less marked. Thus, at St. Michaels, a short distance above the mouth of the Yukon, the mean summer temperature is 50°, but 4° cooler than Sitka. The mean summer temperature of Point Barrow, the most northerly point in the United States, is 36.8°, but four-tenths of a degree less than the temperature of the air flowing across the summit of Pike's Peak, Colorado.

The rainfall of the coast region north of the Yukon delta is small, diminishing to less than 10 inches within the Arctic circle.

The climate of the interior, including in that designation practically all of the country except a narrow fringe of coastal margin and the territory before referred to as temperate Alaska, is one of extreme rigor in winter, with a brief but relatively hot summer, especially when the sky is free from cloud.

In the Klondike region in midwinter the sun rises

from 9:30 to 10:00 a. m. and sets from 2:00 to 3:00 p. m., the total length of daylight being about four hours. Remembering that the sun rises but a few degrees above the horizon and that it is wholly obscured on a great many days, the character of the winter months may easily be imagined.

We are indebted to the United States Coast and Geodetic Survey for a series of six months' observations on the Yukon, not far from the site of the present gold discoveries. The observations were made with standard instruments and are wholly reliable. The mean temperatures of the months October, 1889, to April, 1890, both inclusive, are as follows: October, 33° (above zero); November, 8° (above zero); December, 11° (below zero); January, 17° (below zero); February, 15° (below zero); March, 6° (above zero); April, 20° (above zero). The daily mean temperature fell and remained below the freezing point (32°) from November 4, 1889, to April 21, 1890, thus giving 168 days as the length of the closed season 1889-90, assuming that outdoor operations are controlled by temperature only, being suspended when the daily mean falls to or below the freezing point.

The lowest temperatures registered during the winter were:

32° below zero in November.
47° below zero in December.
59° below zero in January.
55° below zero in February.
45° below zero in March.
26° below zero in April.

The greatest continuous cold occurred in February, 1890, when the daily mean for five consecutive days was 47° below zero. The weather moderated slightly about the 1st of March, but the temperature still remained below the freezing point. Generally cloudy weather prevailed, there being but three consecutive days in any month with clear weather during the whole winter. Snow fell on about one-third of the days in winter and a less number in the early spring and late fall months.

Greater cold than that here noted has been experienced in the United States for a very short time, but never has it continued so very cold for so long a time. In the interior of Alaska the winter sets in as early as

September, when snowstorms may be expected in the mountains and passes. Headway during one of these storms is impossible, and the traveler who is overtaken by them is indeed fortunate if he escapes with his life. Snow storms of great severity may occur in any month from September to May, inclusive.

The changes of temperature from winter to summer are rapid, owing to the great increase in the length of the day. In May the sun rises at about 3.00 a. m. and sets about 9.00 p. m. In June it rises about 1.30 in the morning and sets at 10.30 p. m., giving about twenty hours of daylight and diffuse twilight the remainder of the time.

The mean summer temperature of the interior doubtless ranges between 60° to 70° according to elevation, being highest in the middle and lower Yukon valleys.

In addition to this, it may be remarked that the reason for the temperate climate along the coast and the numerous neighboring islands, is found in the existence of a branch of the warm Japan stream which here brings the warmth of the tropics almost within the Arctic circle.

As seen from the report of Chief Moore, the winter temperature of Sitka is about the same as that of Washington City.

The tempering effects of the warm winds which accompany the Japan stream are spent upon the coast side of the mountains, however, and leave to the interior and the adjacent British American possessions a climate very nearly arctic in its severity during the winter season, which comprises about seven months of the year. Owing to the dryness of the air, however, a temperature so low as to cause a shiver in the mind of one dwelling in damp climates can be borne without hardship by those properly equipped.

While it at first would strike the casual reader that the principal placer region, lying between Dawson City in the Northwest Territory and Circle City, Alaska, is far removed from civilization, it is, in point of time necessary to reach it, much nearer to any part of the United States than was California to the East when the gold seekers were obliged to make a sailing voyage of several months or endure the greater hardship of traversing the plains and mountains by wagon train.

From Seattle, Washington, to Juneau is 900 miles,

only a pleasant ocean trip of not more than 3 or 4 days. From Juneau to Dyea (or Taiya) is a trip of 100 miles, made by steamer in half a day at a cost of only $10.00. From Dyea to Dawson City is 580 miles, and it is in the traversing of this distance that the traveler's endurance is taxed.

From Dyea the route is up Dyea river, if frozen, otherwise along a trail skirting its bank, and thence through the famous Chilkoot Pass to the summit of the mountains which divide the coast from the headwaters of the tributaries of the Yukon. The entire distance from Dyea to Lake Lindeman (or Linderman) is only about 24 miles. The first stage (about 6 miles) as above indicated, is along Dyea river, then comes the ascent, which from the base to the summit is about 9 miles. The ascent is difficult for about three miles, but the descent to Lake Lindeman through a small pass is not difficult. This lake is about 6 miles long, and is open as early as the middle of May. It is connected with Lake Bennett, but a short portage is necessary between the two lakes. Navigation may be continued through this lake, which is about 25 miles long, by raft, though boat timber is to be found in the vicinity.

This lake is connected in turn with Tagish lake, which is considerably longer and is frequently subject to winds so high as to interfere with navigation. From this lake an easily navigated river leads to Lake Marsh, 20 miles long and thence to Lake Labarge. The itinerary from Lake Lindeman to Dawson City is fully described at page 275 hereof.

Without a doubt, the mining of gold in Alaska and the Klondike has but just begun. News of the discoveries of fresh fields of even greater richness than those heretofore known indicate that the production of the metal during the year 1897, roughly estimated at $10,000,000, will be greatly exceeded during the present year, with a better knowledge of the country, the benefit of previous experience, cheaper food, and less primitive processes of collecting the gold from the gravel.

Some of the most recent discoveries reported are on the Indian, Big Salmon and Minook rivers, in Canadian territory, but from all accounts received it would seem that there is every probability of a revelation during the season of 1898 of equally rich and extensive

deposits along Birch, Miller and neighboring creeks, and along the Tanana, Sushitna and Copper rivers, all in Alaska. The results of last year's prospecting along the last named river, which empties into the Alaskan gulf on the south coast, were so favorable that many parties are now preparing to thoroughly examine it this year. Thus far the mining on American territory has been confined to Birch creek and tributary streams just west of Circle City.

A land office will doubtless be established at Circle City or at some other place in the interior at an early date; in fact, it would probably have been established in 1897 but for the fact that Congress, after authorizing the appointment of additional local land officers, neglected to appropriate for their compensation, in view of which omission no great pressure has been brought to bear by office-seekers in order to secure appointment to these places.

Attention is directed to the liberality with which the miner is treated by the United States government as contrasted with the mineral land system of British America. Under the United States laws, a citizen, or one who has declared his intention of becoming a citizen, may go anywhere upon the unreserved public domain, and, for his energy in discovering and developing the mineral resources of the country, is absolutely given the exclusive right to work the claim located for his sole benefit; while under the laws of Canada, every other claim is reserved absolutely to the government, and a large royalty on the mineral produced is exacted from the miner who has the good fortune to discover a paying mine. The expense of maintaining possessory right from year to year under the Canadian laws is also considerable.

It is impossible at the present time to ascertain with any certainty the extent to which Alaskan miners have availed themselves of the privilege, given by section 2324, U. S. Revised Stat., of forming mining districts with local rules, regulations, or customs; but it is known that a number of such districts have been established and recorders of notices of mining locations elected. If reports are true of the regulations of several of these districts, and especially with respect to the performance of annual assessment work, some rules adopted for these districts are probably in

contravention of United States laws, and must therefore give way to the latter. It is very probable that the importance of these districts will never be as great as it has been in other mining regions, by reason of the fact that the population will always be of a more shifting character in this inhospitable climate than in those localities which, while first settled by prospectors, now contain prosperous cities.

The prospector goes to Alaska with the hope of "striking it rich" and then returning home, there being no inducement to remain there longer than necessary to secure the coveted sack of the precious dust or nuggets.

RESERVATIONS.

By President Harrison's proclamation of June 21, 1890, certain tracts at Juneau, Sitka, Douglas and Fort Wrangel were reserved for public use, for public buildings, barracks, wharves, coaling stations, etc. By President Cleveland's proclamation of November 14, 1896 (29 Stat. at Large, 883), the reservation at Sitka was lessened to the extent of certain lands occupied by the Greco-Russian Church.

By Executive order of February 20, 1897, certain tracts were reserved on Kupreonof Island, Chichagoff Island, and at Chilcat, for public uses; also a tract on Iliuliuk Harbor at Unalaska, as a coaling and supply station for the use of the U. S. Revenue Marine service.

By Executive order of August 21, 1897, tracts on Kadiak and Killisnoo Islands, on which public school buildings were situated, were withdrawn, as also a tract situate in the town of Unalaska.

By Executive order of October 15, 1897, a tract designated as "Lot 20a," in the town of Sitka, was reserved for naval purposes.

The largest reservation in the district of Alaska, however, is that at Fort St. Michael, near the mouth of the Yukon. The order of reservation, and regulations thereunder, are as follows:

REGULATIONS.

War Department, Washington, October 20, 1897.

1. By authority of the President, the land known as

St. Michael Island, Alaska, with all contiguous land and islands within one hundred miles of the location of the flagstaff of the present garrison on that island, is set aside from the public lands of the Territory of Alaska and declared a military reservation.

Parties who have, prior to the receipt of this order, located and erected buildings on the land so reserved, will not be disturbed in their use of lands, buildings and improvements, nor in the erection of structures needed for their business or residence.

2. The military reservation above declared, and the military post located thereon, will be known as Fort St. Michael, and will be under the control and supervision of the Commanding Officer of the troops there stationed.

R. A. ALGER,
Secretary of War.

In the absence of other provision of law and of all local civil officials within the limits of country surrounding the island of St. Michael, and the mouth of the Yukon River, the foregoing described reservation has been established for the security of life and property, the preservation of order, and the protection of property and business interests. Proper persons, associations, or corporations already located on, or desiring to enter upon and conduct legitimate business enterprises within the limits of this Military Reservation, will observe the following regulations:

1. Applications for permission must be accompanied by testimonials of good character and standing, and be made in writing, addressed to the Secretary of War, reciting the nature of the business to be conducted; the location, as nearly as possible, on unoccupied land within the reservation; the area of land necessary; number and character of buildings, etc., to be erected, and probable date when occupancy is to be commenced and terminated. Those located on this reservation at the time the reservation was made will in like manner present their application for permits, and the Commanding Officer will not disturb them in their use and occupancy in conformity to these regulations until the action of the Secretary of War on their application is known.

2. The permit to be issued by the Secretary of War

will describe the persons, business, location, etc., and will authorize the grantees to enter upon the reservation at the location named, and maintain the specified business, and none other. Where a definite location cannot be given in the permit, authority will be given to the Commanding Officer of Fort St. Michael to authorize an appropriate location; but no permission will be given to use land that was included under the original order as located and used, and no permit will be given to locate on the land set apart for buildings, wharves, parade, and drill grounds for the post of Fort St. Michael. A plat showing authorized locations and grounds, with the name or names of the holders of permits, will be kept in the office of the Commanding Officer.

3. This permit will not be negotiable, and will be of no value or effect until presented to and recorded by the Commanding Officer of Fort St. Michael, and the location staked out by him. It will not be transferable without the approval of the Secretary of War, except where both parties to the transfer are on the ground and one desires to dispose of his interest, in which event the Commanding Officer of Fort St. Michael may authorize the transfer, reporting his action to the War Department. It will give no right or title to ownership of lands occupied, and is revocable at the will of the Secretary of War.

4. Applications for permission to sell any improvements made through virtue of these permits must be made through the Commanding Officer of Fort St. Michael to the Secretary of War, and will only be approved on the same conditions on which a permit is originally issued.

5. Persons, associations, or corporations occupying lands, buildings, or privileges under these permits will be subject at all times to such police regulations as may be imposed from time to time by the Commanding Officer of Fort St. Michael or higher authority.

6. Any modification of this permit, after use, must be applied for in writing, and forwarded through the Commanding Officer of Fort St. Michael for the action of the Secretary of War; notice of a proposed termination of the permit will be given by the grantee at least thirty days before removal, and upon removal from the reservation the permit will be surrendered to

the Commanding Officer of Fort St. Michael; and the location must be left by the occupants in good sanitary and police condition.

7. In case of naturally restricted landings, sites for buildings, ship-yards, etc., no monopoly will be given to any person or corporation, and no permit will be construed to do this, and all disagreements between holders of permits will, after a careful hearing by him, be settled by the Commanding Officer of Fort St. Michael.

8. No retail of distilled spirits on the reservation will be allowed; but this prohibition shall not include light wines or beer. (Section 1955, Revised Statutes; Act approved May 17, 1884.)

9. It is to be understood that these permits are issued subject to any subsequent legislation of Congress.

ANNETTE ISLAND.

This island is in the extreme southeasterly part of Alaska, being some distance south of Sitka. It contains about 135 square miles, is fairly wooded, and has salmon fisheries. Its chief peculiarity lies in the fact that it is, to all intents and purposes, an Indian reservation for the benefit of a tribe of Canadian Indians who left British Columbia by reason of trouble arising between the missionary, under whose charge they have been civilized, and the Canadian authorities.

By Section 15 of the act approved March 3, 1891, 26 Statutes at Large, 1101, it was enacted:

"That until otherwise provided by law, the body of lands known as the Annette Islands, situated in Alexander Archipelago, in Southeastern Alaska, on the north side of Dixon's entrance, be, and the same is hereby set apart as a reservation for the use of the Metlakahtla Indians, and those people known as Metlakahtlans, who have recently emigrated from British Columbia to Alaska, and such other Alaskan natives as may join them, to be held and used by them in common, under such rules and regulations, and subject to such restrictions as may be prescribed from time to time by the Secretary of the Interior."

Within the past four years, ledges of gold-bearing quartz have been discovered on this island, which, it is said, far exceed in richness those of the Treadwell mine on Douglas Island. Numerous mining claims have been located on these ledges, but these locations, having been made subsequent to the act of reservation, are of no legal effect, and the miners have been warned that their presence on the island constitutes a trespass.

At the present session of Congress, a bill has been introduced in the House having for its purpose the opening to exploration, location and purchase that portion of the island containing these mineral deposits. While said bill may not become a law during this session, it would seem that no long time should elapse before our national legislators should become convinced of the injustice of keeping the lock of reservation upon these golden treasures of Nature for the sole purpose of benefiting a tribe of aliens having no claim upon this government.

In his report for 1897, the Secretary of the Interior recommended that citizenship be conferred upon these Indians, while it would appear, at the same time, from the maintenance of said reservation, that the government is solicitous of keeping them from the baneful effects of close associations with white citizens.

EXTRACT FROM THE REPORT OF THE COMMISSIONER OF EDUCATION FOR THE YEAR 1897.

For more than 20 years Alaska and the adjacent regions of northwestern British Columbia have been increasing the world's supply of gold. The first considerable contribution was from the Cassiar mines, at the head of Dease River, in British Columbia, where in 1874 $1,000,000 of gold was taken out. However, after that year, their product gradually decreased, and at the *present time they are practically abandoned*, having added about $5,000,000 worth of gold to the world's stock. During the succeeding years gold was discovered in paying quantities here and there in southeast Alaska, and the tents of prospectors began to make their appearance on the shores of the islands of the

Alexander Archipelago. Gradually, as the knowledge of the region spread, capitalists became interested, with the result that at several points which had been occupied by placer miners, stamping mills and chlorination works were established.

Large and well equipped mines exist at Silver Bow basin, near Juneau, and at Berners Bay. Considerable prospecting and placer mining is also being done in southeast Alaska. According to the report of the governor of Alaska, $2,300,000 worth of gold bullion was taken from mines within the Territory of Alaska during the year ending October 1, 1896.

Since 1885 there has been more or less prospecting in the Upper Yukon region, both on the American and British sides of the international boundary line, the tributaries Forty Mile Creek and Sixty Mile Creek being the centers of operations. Twenty-three miles above its mouth Forty Mile Creek crosses the one hundred and forty-first meridian and enters British territory. At its mouth a town was built, which for several years was the base of supplies for that region. Two or three years ago gold was discovered on Birch Creek, which is wholly in American territory, and empties into the Yukon near where the great river crosses the Arctic Circle. Circle City was the result of the stampede which followed this new discovery. It is estimated that the Birch Creek district produced last year nearly a million dollars' worth of gold.

According to the statements of returning miners, the first of the discoveries in the Klondike region of British Columbia was made last summer by a miner named George McCormick while waiting near the mouth of Bonanza Creek, a tributary of the Klondike, for the salmon to run. The first claim was staked out on Bonanza Creek on August 17, 1896. Up to the date of the departure of the first steamer down the river, June 19, it is reported that 800 claims had been located; that where there had been a little native village of not more than 100, Dawson City, with a population of more than 2,000, had sprung up with all the characteristics of a new mining camp, the population being composed principally of miners from the neighboring districts. The returning steamer carried about $500,000 of bullion.

The Klondike is described as a river several hundred miles in length, difficult to navigate by reason of its

swift current. The mines are on its tributaries, Bonanza, El Dorado, Hunker and Bear creeks. These rivers, which during the spring and early summer are torrents fed by the melting snow, dwindle during the intense heat of summer into inconsiderable streams, which the intense cold of winter freezes up. The claims are in the bed of the stream, and are best worked in winter. Each claim is 500 feet in the direction of the river from bank to bank, provided it does not exceed 666 feet. The cost of recording a claim is stated to be $15 and the yearly rental $100. It is reported that the Canadian authorities have now restricted the length of a claim to 100 feet. (See p. 341 et seq.) The method of winter mining is laborious. The surface soil being frozen, fires are built which gradually thaw the sand and gravel beneath them. The surface deposit thus softened is shoveled out; this process is continued until a shaft has been sunk into the gold-bearing layer. Fires are then built against the sides of the shaft and tunneling carried on under the frozen gravel. The pay dirt is piled up, to be washed out in spring when the water begins to run.

In the Yukon mining regions of British Columbia the Canadian Government has, for the past two years, maintained a mounted police force, consisting of 20 men, the captain of which is invested with the powers of a magistrate. Recently it has been decided to send 85 additional men to the Klondike region. A gold commissioner has been appointed, and it is stated that a steam launch will ply on that part of the Yukon as a police boat. On the American side of the boundary line the miners' meeting has held full control and jurisdiction, but the recently appointed United States commissioner, with Circle City as headquarters, will provide a more formal mode of government.

In order to reach the new gold region, the prospective gold miner has the choice of two distinct routes; one of these leads to the mouth, the other to the headwaters of the Yukon. From San Francisco or Seattle to St. Michael, the nearest harbor to the mouth of the Yukon is a voyage of about fourteen days. At St. Michael passengers and freight are transferred to small stern-wheel steamers, as even at high tide there is scarcely 2 fathoms of water in the Yukon Delta. Above the delta the river is much deeper, and there is an

uninterrupted run of about 1,800 miles to Fort Selkirk, at the junction of the Pelly and Lewis rivers. This route can be taken only in the summer months, as the Yukon is frozen from the latter part of September until June. The second route crosses the mountain range of southeast Alaska. Upon leaving tide water, at the head of Lynn Canal, there is a choice of three passes—the Chilkat, White, and Chilkoot. Of these the most frequently used is the Chilkoot.

SPECIAL AGENT IVAN PETROFF—ALASKA—ITS POPULATION, INDUSTRIES AND RESOURCES.

The people of the United States will not be quick to take to the idea that a volume of water in an Alaskan river is greater than that discharged by the mighty Mississippi; but it is entirely within the bounds of honest statement to say that the Yukon river, the vast deltoid mouth of which opens into Norton sound of Bering sea, discharges every hour one-third more water than the "Father of Waters." There is room for some very important measurements to be made in this connection, which I hope will soon be made. We know the number of cubic feet of water which the Mississippi rolls by New Orleans every day, but we do not possess authority concerning the volumes of the flood discharged by the Yukon. Entering the mouth, or rather any one of the mouths, of this large river, we are impressed first by the exceeding shallowness of the sea 50 miles out from it, varying in depth from 2 to 3 fathoms; and, second, by the mournful, desolate appearance of the country itself, which is scarcely above the level of the tide, and which is covered with a monotonous cloak of scrubby willows and rank grasses. The banks, wherever they are lifted above the reddish current, are continually undermined and washed away by the flood, and so sudden and precipitate are these land-slides at times that traders and natives have barely escaped with their lives. For 100 miles up through an intricate labyrinth of tides, blind and misleading channels, sloughs and swamps, we pass through the same dreary, desolate region, until the higher ground is first reached at Kusilvak, and

until the bluffs at Andreievsky and at Chatinakh give evidence of the fact that all the land in Alaska is not under water. It is watered, however, here, there, and everywhere, and impresses one with the idea of a vast inland sea; which impression holds good even as far up the river as 700 or 800 miles, where there are many points, even far in the interior, at which this river spans a breadth of 20 miles from shore to shore. As we advance toward its source we are not surprised when we view the character of the country through which it rolls, at the vast quantity of water in its channel. It would seem as though the land itself drained by the river on either side within Alaska were a sponge, into which all rain and moisture from the heavens and melting snow are absorbed, never finding their release by evaporation, but conserved to drain, by myriads and myriads of rivulets, the great watery highway of the Yukon. I noticed a striking evidence of the peculiar non-conductive properties of the tundra mosses, or swale, last summer in passing through many of the thousand-and-one lakes and lakelets peculiar to that region, where the ice had bound up the moss and overhanging water-growth at the edges of the lakes. In the breaking up and thawing out of summer that ice failed to melt, and the renewed growth of the season's vegetation, reaching out in turn from this icy border, will again prevent thawing, and so on until shallow pools and flats are changed into fixed masses of ice hidden from view.

There is another feature in this country which, though insignificant on paper, is to the traveler the most terrible and poignant infliction he can be called upon to bear in a new land. I refer to the clouds of bloodthirsty mosquitoes, accompanied by a vindictive ally in the shape of a small poisonous black fly, under the stress of whose persecution the strongest man with the firmest will must either feel depression or succumb to low fever. They hold their carnival of human torment from the first growing of spring vegetation in May until it is withered by frosts late in September. Breeding here, as they do, in the vast network of slough and swamp, they are able to rally around and

to infest the wake and the progress of the explorer beyond all adequate description, and language is simply unable to portray the misery and annoyance accompanying their presence. It will naturally be asked how do the natives bear this? They, too, are annoyed and suffer, but it should be borne in mind that their bodies are anointed with rancid oil; and certain ammoniacal vapors, peculiar to their garments from constant wear, have repellant power which even the mosquitoes, bloodthirsty and cruel as they are, are hardly equal to meet. When traveling, the natives are, however, glad enough to seize upon any piece of mosquito-net, no matter how small, and usually they have to wrap cloths or skins about their heads and wear mittens in midsummer. The traveler who exposes his bare eyes or face here loses his natural appearance; his eyelids swell up and close, and his face becomes one mass of lumps and fiery pimples. Mosquitoes torture the Indian dogs to death, especially if one of these animals, by mange or otherwise, loses an inconsiderable portion of its thick hairy covering, and even drive the bear and the deer into the water.

RESOURCES.

Glancing at the map the observer will notice that hydrographers have defined the passage of a warm current, sufficient in volume and high enough in temperature to traverse the vast expanse of the North Pacific from the coast of Japan up and across a little to the southward of the Aleutian islands, and then deflecting down to the mouth of the Columbia river, where it turns, one branch going north up along the coast of British Columbia by Sitka, and thence again to the westward until it turns and bends back upon itself. The other grand arm, continuing from the first point of bifurcation, in its quiet, steady flow to the Arctic, passes up to the northeastward through the Strait of Bering (the existence of this northern branch of the warm Japanese current has been denied by Mr. William H. Dall, of the United States coast and geodetic survey). This warm current, stored with tropical heat, gives rise naturally, as it comes in contact with

the colder water and air of the north, to excessive humidity, which takes form in the prevalent fog, sleet and rain of Alaska, as noted and recorded with so much surprise by travelers and temporary residents from other climes.

Therefore at Sitka, and, indeed, on the entire seaboard of South Alaska and the Aleutian islands, instead of finding a degree of excessive cold carried over to the mainland across the coast range, which the latitude would seem to indicate, we find a climate much more mild than rigorous; but the prevalence of fog clouds or banks, either hanging surcharged with moisture or dissolving into consecutive weeks of rain, so retard and arrest a proper ripening of fruits and vegetables in that climate that the reasonable certainty of success in a garden from year to year is destroyed.

MINERALS.

Coal is found chiefly or wholly of a lignite composition, at a great many points throughout the southern and western coasts of Alaska and the islands thereof; and during the past season a vein was opened in the Arctic, above cape Lisburne, by Captain Hooper, of the revenue marine, who says that he mined it easily and used it with great satisfaction in making steam for his vessel. The oldest coal mine in the country is that on Cook's inlet, near its mouth, at a place still called on the map Coal harbor. The Russians also took notice of coal at Ounga [Unga], on the Shumagin islands, and several openings were made by them of veins here and there in the Alexander archipelago. Following the Russians, our people discovered and attempted to work one or two in Sitkan archipelago, and several to the westward. The quality of all this coal located and worked for a brief experimental period was of so poor a grade that in no case has it been pronounced fit for use on steam-going vessels, being so highly charged with sulphur and other deleterious combinations. The value, however, of Captain Hooper's vein in the Arctic to the opening enterprise of steam whaling, and for the use of the revenue marine itself, must be of very striking moment. These

experiments with Alaskan coal have been exceedingly thorough and patiently wrought out at Ounga [Unga], where the most laudable, persistent and even desperate determination has been manifested by the owners of certain ledges thereon to develop their holdings into mines of wealth. The steamers in the territory bring their own coal with them, or have it sent up by tender from British Columbia sound or California. The traders at the different posts where timber is scarce or entirely wanting use it now as their principal fuel, and it is the sole fuel on the seal islands.

In regard to the reputed findings of large-paying gold mines and other precious minerals I can only say that, as far as is known, there is nothing of the kind in western Alaska; at least, there is nothing located and worked as such, though the prospecting or searching is as active as it has been since the transfer. The surface of the country in southern Alaska being so mountainous and concealed by the timber-cloak everywhere covering it, it is of course a slow and exceedingly difficult undertaking to penetrate any distance back, up, and among the mountain valleys in search of mineral. The color of gold can be washed out of the sands of every little stream emptying into the ocean on the northwest coast, and in many places it can be found by searching in the surf-beaten beaches of the sea-coast itself. But the question immediately arises with the miner, "Will it pay?" and by that he means, "Will it yield me from $4 to $10 a day if I work it?" Less return for his labor does not satisfy him, nor will it bring others to the places.

The gold-bearing belt of the Rocky Mountain divide, so familiar to us as it crops out all through our states and territories, reaches undoubtedly to the Arctic sea itself. But it must be borne in mind that with every degree of northern latitude as we ascend we cut off working-days, as the icy grasp of frost checks the flow of water and shuts down the mills, so that when this gold-bearing belt crosses into our Alaskan boundary far back, and concealed from the sea by the towering summits of the coast range, we find it practically barred out from our miners unless they shall find the free gold and a rich quartz in unwonted abundance.

Since 1880, however, much surface-gold has been found in the mountains on Gastineaux channel, be-

tween Douglas island and the mainland, chiefly from the decomposed croppings of ledges. These discoveries have attracted several thousand miners and their followers, and a thriving town, now named Juneau City, has sprung up, claiming very bright prospects, in spite of the long interval of enforced idleness between December and April. The never-satisfied prospector has already left these diggings behind and pushed on from the head of Lynn canal across the divide separating the headwaters of the Yukon from the north Pacific; but whatever discoveries have been made there, are located in British Columbia, and consequently without the pale of this report.

The Cassiar diggings, which have during the last five or six years given quite an impetus to Alaskan travel by Fort Wrangell and Sitka, are situated in the territory or dominion of British Columbia, far up the Stakhin [Stikine] river, and away from our limits.

In Norton sound, within the deep land-locked shoals of Golovnin bay, there are reputed to be leads of silver ore and graphite. Cinnabar has also been discovered on the Kuskokvim, and assays made of the ore in San Francisco indicate a very valuable discovery there. Other than these minute circumstances, we have no better evidence of the mineral wealth of Alaska to offer at this writing, unless we refer to the old legend and partial corroboration of it in regard to the presence of an extensive deposit of copper in situ on the banks of the Atnah or Copper river. There is also a mine opened, but just at present not worked, on Prince of Wales island. This little mine, however, we might say is owned by British Columbians, who say that they are barred out from their legitimate home market on account of the Dominion tariff; hence they are idle.

EXTRACT FROM REPORT OF GOVERNOR OF ALASKA FOR 1890.

A large part of the attention given to mining during the year was in the practical development of claims already located and doing assessment work to keep claims alive, though the prospector has been abroad as usual, and a large number of locations have been

made. Six patents have been received at the land office, with cash payments to the amount of $1,802.50, making the total number of patents actually received to this time fourteen. Ten new applications have been made for patents.

Considerable activity has been manifested, but no excitement, in connection with the various mining interests. Placer-mining is carried on in at least eight districts, viz.: Silver Bow basin, near Juneau; Sum Dum and Shuck, some distance south; Latuya Bay, on the coast north of Cross Sound; Yakutat, Kenai Peninsula, the Fish River District, on Norton Sound, and the Yukon District, including the rivers flowing into the Yukon. About 50 miners passed over the divide from Chilcat in the early spring to take the places of those who returned in the fall from the Yukon District, where it is thought there are at least 275 men engaged in the placer-mining of the region, most of whom remained there during the winter. The results of their work are not definitely known, and reports are somewhat conflicting. One report says that 120 men, wintering on Forty Mile Creek, cleaned up from $2,000 to $3,000 each; another says 30 men wintered on Stewart River and all did well. At Latuya Bay and Kenai it is thought that the mines have afforded rich yields. Great expectations were announced as to the Shuck and Sum Dum regions, since which time very little has been said about them, from which it may be inferred perhaps that the expectations have been moderately realized. The Silver Bow Basin placers which have been worked have yielded satisfactory returns. A consolidation of a large number of claims in the Silver Bow Basin Mining Company, F. H. Nowell, manager, has reduced the number of separate concerns, but has not diminished the amount of work done. This company is digging a tunnel under the mountain to tap the pocket of the basin from below, and the work has been pushed vigorously and systematically. Relays of workmen keep the rock moving night and day, summer and winter. It is thought the tunnel will be through to its first opening by December next. This enterprise is considered an assured success. The character of the deposit is known, and the improved method of securing the gold will facilitate the work and enhance the profits.

Quartz lodes are worked in ten or more districts, some of which are large and contain many distinct claims. The ten districts referred to are as follows, to-wit: Sheep Creek region, which affords ore containing silver, gold and other metals; Salmon Creek, near Juneau, silver and gold; Silver Bow Basin, mainly gold; Douglas Island, mainly gold; Funter Bay, on Admiralty Island, mainly gold; the Silver Bay mining district near Sitka, gold and silver; Berner's Bay, in Lynn Canal, mainly gold; Fish River, mining district on Norton Sound; Unga district and Lemon Creek. Many of the ores containing silver and other metals, notably the Sheep Creek, Salmon Creek and Lemon Creek ores, are sent to smelters long distances away for reduction, the necessary conveniences not being found near at hand. Some of the ores are simply piled up waiting for future opportunities, or the erection of mills. The number of mills for crushing the ore and obtaining the free gold, within the territory, is, I believe, thirteen, only one or two of which have chlorination works to reduce the sulphurets. The mills may be enumerated as follows:

The Treadwell mill is said to be the largest stamp mill in the world. It has 240 stamps, 96 concentrators, 12 ore crushers, a 500-horse-power water wheel, and all the conveniences for reducing the ore with the least expense. The ore is low grade, yielding from $6 to $12 per ton, but it is convenient to tide-water, and the expenses have been reduced to a minimum. The capital stock of the company is divided into 100,000 shares. The first dividend was paid in August, 1885, and was 25 cents per share.

It is not supposed that these dividends represent the measure of profits, for much of the earlier earnings was put back into the business in adding to the facilities. About $15,000 were expended in development work upon the mines of Sheep Creek during 1889, and considerable ore was taken out and transported to San Francisco for reduction. Sixty tons of ore from the Silver Creek mine gave an average return of $200 per ton. The smelting returns show that the lowest grade of ore shipped, which came directly from the surface workings, ran 66 ounces of silver and $4 in gold to the ton, while the first-class ore gave returns of 341 ounces of silver and $22 of gold. In many of the mines the work

of the last year was mainly preparatory to future operations, consisting of excavations, tunneling, road building, etc.

Southeastern Alaska was divided into three recording districts by order of the United States district court on the 6th day of February, 1888. The recording for the Sitka recording district is done by the clerk of the court, who resides at Sitka. The recording for the Juneau district is done at that place by the United States commissioner residing there, and the United States commissioner at Fort Wrangell has charge of the recording in the Wrangell district. All mining claims are filed in the recording district where located, but patents must be sent to the land office, which is at Sitka.

Of the other minerals than gold and silver all discussions must be based upon surface observations, except to a very small extent in regard to coal, which has been taken out in comparatively small quantities at Killisnoo, in Kachekmak Bay in the Kenai Peninsula, at Unga, Port Muller, Yakutat, Murder Cove on Admiralty Island, and Cape Lisburne. And these places can scarcely be said to have been worked. They have only been prospected. The coal found thus far is generally soft, pitchy, and bituminous, though the Kenai coal is reported to be lignite. The Killisnoo coal is generally of the character mentioned, but one claim that has been worked to quite a depth during the last year by Messrs. Brady and Whitford is thought to afford a coal having better qualities and which is especially valuable for coking purposes. All the coals of Alaska are free burning coals. The products of the Port Muller mines are said to be better suited for steaming purposes, being harder and more enduring than most of the coals of the territory and quite free from sulphur. Vessels running short of coal frequently take on supplies from the surface outcroppings at Cape Lisburne, at Unga and at Kenai, though the coals obtained at these places are not first-class steaming coals. Indications are abundant of valuable deposits in other places, especially on Sullivan, Kuiu, and Revilla-Gigedo Islands and in the Yukon Valley. The main land deposits have not been investigated at all.

Marble deposits are frequent on Admiralty, Prince of Wales, Long, and Baranoff Islands, and have been

observed in many places upon the main land. No surveys have been made and no careful observations taken, so far as I know. The Halleck stone has been used for the manufacture of lime, producing an excellent article, and small specimens of the deposit near Killisnoo have been cut and found to receive a fine polish. From personal observations of many of the locations and specimens, I am satisfied that if sound stone can be obtained from anywhere near the surface, profitable business will eventually grow up at several points. Whether skilled experts can judge from surface indications as to the soundness of the rock beneath, I am unable to say. But with two or three exceptions the outcroppings do not indicate soundness to the uninitiated. At Shakan there is a magnificent exposure of white and dove-colored marble which appears very much like the bared surface of the rock at the Vermont quarries. The texture of the stone is all that could be desired. The location is very fine, being near tide water, in a fine harbor, and with plenty of water power near by for cheap manufacture. A careful survey by competent judges might determine the value of this deposit without much expense in development work.

A hasty examination from a row-boat, along shore in Taiya Inlet, disclosed what appeared to be a valuable deposit of granite in a position to be very accessible and easily worked. Granite and porphyry largely compose the smooth, worn pebbles and small stones of the Chilcat River for 25 miles up from its mouth.

On several occasions at places quite remote from each other, I have found specimens of jade, among the natives, but in no case was I able to learn from them where the specimens were obtained. Their manner, when inquiries were made, gave the impression that they were unwilling to give information.

Native copper and copper ores, taken from the region about Copper River, are on exhibition, though but little is known of these deposits. The natives have frequently brought down to the coast pieces of pure copper, knives and bullets of the same, since long before the American occupation of the country. Barnite, a sulphuret of copper, seems to be quite abundant. The Chyttyto and Chyttyne Rivers, branches of the Cop-

per, have both furnished fine specimens of native copper. Late last fall some very rich, gray copper ore was found about 50 miles south of Juneau. This ore also contains silver. Flint and pyrites are considered valuable minerals by the natives, who use them instead of matches for kindling fires.

EXTRACT FROM REPORT OF GOVERNOR FOR 1891.

While it was not the mines and minerals of Alaska that first called attention to the remarkable features and characteristics of this country, the discovery of gold has had great influence in its progress and development. Our mineral resources are the subject of more discussion and still create a greater fever of excitement than any other. Furs first attracted the emigrant, and the fur business may still be considered its leading industry. The fishing interests come second, and raise the question by their magnitude and importance whether they should not be held first in estimation. After furs and fisheries statistics give mining the chief place in Alaska's industries, and the confident expectation in the minds of many people that mining interests will soon lead all others is certainly supported by numerous and suggestive indications of great wealth. Many discoveries of rich ore and placer deposits have been made within the year, and locations by scores have been recorded in the local recording districts. Placer mining has shown no abatement, and in 1890 the Yukon placers are said to have yielded a third more gold than in any other previous year. Hydraulic mining on a more extensive scale than formerly promises better results. The tunnel of the Silver Bow Basin Mining Company at Juneau has been completed and the washing of the rich deposit has been in operation for some months. The success of the enterprise is apparent, but the results in statistics do not belong in this report. At Latuya Bay the cleanup for the last season was so satisfactory that a much larger force has been carrying on the work the present season. The managers are reticent as to the exact results. At Shuck are three principal basins filled with deposits of gravel, which appears to be rich in min-

eral. It is owned by the Shuck Bay Placer Mining Company. The lower basin has been tapped by a tunnel 700 feet in length, and the work of washing has begun. No cleanup had been made at last advices. Work has also been commenced upon the upper basins. The company is confident. The work at Sum Dum has been carried on for some years in a desultory way with a degree of success which warrants belief in the value of the mines. Tunnels have been commenced at Salmon Creek, near Juneau, and at Sheep Creek only a little further away, and ore of excellent quality taken out. A mill with ten stamps has been built at the latter place within the year. The Archie Campbell Mill was kept in operation during a large portion of the year. The Treadwell Mill and Mining Company have continued work to their full capacity, with results as satisfactory as ever. The 80-stamp mill of the defunct Bear's Nest Company has been divided up and removed to other places, where it will be of service. The Funter Bay Mine on Admiralty Island has continued its usual activity. Operations at Berner's Bay have been somewhat limited. More activity has been manifested in the Silver Bay district, near Sitka, several mines neglected for some time having been worked again. The work has, however, been on a limited scale, and it is too early to discuss results.

A comparatively new mining enterprise is the Apollo Consolidated Mining Company, at Unga. On the 1st of May last their tunnel had reached the extent of 900 feet, a 5-stamp mill had been erected and used sufficiently to test the ore. The mill has 5 stamps, 4 amalgamators, 1 grinding pan, 1 improved Frue concentrator, a 50-horse-power engine, and buildings enough to greatly increase its working capacity by more machinery. The tunnel work thus far has been mainly preparatory and to discover the value of the mine. The assayer gives the highest encouragement and the company have a right to expect a return of their investment at an early day. Fifteen mills for crushing ore and having the conveniences for securing the free gold and obtaining the sulphurets in a compact form for shipment represent the sum of this form of equipment in Alaska. Several mills have also amalgamators and chlorination works. Fourteen mills were reported last year, two have been since erected, and one (the

Bear's Nest) dismantled. The number of stamps in the aggregate has increased from 525 to 540. Several of the small mills have not been in operation during the year.

The production of gold and silver in Alaska has been both overestimated and underestimated. Those who assume that the whole output is shipped to the mint direct and consequently reported, place the amount at $800,000, which, certainly, is much too small an estimate. The estimate used in this report, $1,000,000, is probably less than the amount actually produced. Successful business of all kinds is more likely to seek concealment than publicity, as to exact results, and the opportunities of individual placer miners and small firms to quietly pocket their earnings, or to dispose of them without ostentation, are ample.

Of other minerals coal alone has been mined, and that to such a limited extent that coal mining can scarcely be called a business in Alaska. A number of deposits have received attention. At Port Muller, in Herendeen Bay, the Alaska Commercial Company took out 500 tons of soft coal during the summer, and it was used at Unalaska, Belkofsky, Unga, and other stations of the company. An inspection of it in the warehouse revealed a fine-looking article, and reports indicate a free-burning lignite. It is consumed rather too quickly for steaming purpose. This mine is located quite near the Bering Sea side of the peninsula, and 13 miles from Portage Bay, to which it is proposed to build a railroad and deliver the coal from the southern port. An old mine on the north shore of Unga Island has been worked to a small extent to supply a local demand. The quality of the surface croppings, which alone have been reached, is not entirely satisfactory. A more extensive venture has been made at Kachemak Bay, on the eastern shore of Cook's Inlet, where are extensive coal deposits lying conveniently for mining operations. The quality of this coal does not seem materially different from that found elsewhere in the Territory. Some 3,200 acres of these lands have been claimed, and the claimants are maintaining their occupation and making a show of work upon them. The tests of the quality are said to prove that in the near future, when conditions are right for it, an extensive business will grow up here. Several other deposits of coal on

Cook's Inlet furnish samples of similar quality to those in Kachemak Bay. Coal deposits at Yakutat, Killisnoo, and Admiralty Island have been prospected, and good samples found, but no steps have been taken for systematic development. Copper, cinnabar, iron, marble, and granite abound, and Jade Mountain, a little northward of Kowak River, is alleged to furnish immense quantities of fine nephrite, but no survey has been made with a view to determining the value of minerals in the Territory, and information as to all of them, except those mined or quarried, is indefinite and unreliable.

EXTRACT OF REPORT OF GOVERNOR FOR 1892.

Eight mining districts have organized and made regulations under the authority given by Section 2324, Revised Statutes, and others have taken some of the steps toward organization, viz.: The Sitka mining district, which includes Silver Bay and the region about Sitka; the Harris mining district, including the mines in the vicinity of Juneau; the Cleveland mining district, in the Kenai peninsula and about Cook's Inlet; the Portage Bay mining district, including a section of the Alaska peninsula about Portage Bay, Pavloff Harbor, Herendeen Bay, and Port Muller; the Nyack mining and recording district, including Kadiak Island; the Unga mining district, including the island of Unga; the Unalaska mining district, including the mining claims about Unalaska; the Fish River mining district, on Norton Sound. There are also the Berners Bay, the Shuck, the Funter Bay, and perhaps others, which are supposed to be distinct districts, but I have been unable to learn definitely about their organization. They record their claims in the Juneau land-recording district.

Quartz lodes of great promise have lately been discovered on Forty Mile Creek, and this may have led to the location of claims and the organization of a mining and recording district there, but specific advices have not been received.

There has been no abatement of placer mining. In fact, more gold was taken out in 1891 than during any previous year. On Gold Creek much of this work has been done, and the hydraulic work of the Nowell Gold

Mining Company at Silver Bow Basin has been extensive. I shall refer to this business hereafter. There has been placer mining at Lituya Bay, and some $7,000 taken out by Messrs. Wheelock and Orton and others; at Yakutat, the sand from the beach yielding a fair profit to labor expended; at Sum Dum, Shuck, and other places in southeastern Alaska; at several places in Cook's Inlet; at Forty Mile Creek, which is a branch of the Yukon, some 1,800 miles from its mouth. About 275 miners were in there during the last year, and it is known that they had the best season ever experienced in that region. Some fifty of them came out last fall and reported a rich yield. It was claimed that they cleaned up about $2,000 each. If one-half of that amount is allowed as the average secured, the total aggregates $275,000. The number of men returning into the interior this season was greater than those coming out in the fall. Letters received by Mr. William C. Greenfield, who was through there last year (now at Wood Island), dated July 5, 1892, state that two new gulches struck last fall, and one discovered this spring, afford the richest diggings yet found in that rich gold region. The placers here yield from 5 cents to $1 per pan. Rich ore has also been discovered here, and facilities for reaching the place with machinery and supplies, it is thought, would attract capital to work the lodes. The new steamer put upon the Yukon the present season will furnish additional facilities for reaching these mines.

The Alaska Treadwell Gold Mining Company has its offices in San Francisco, but its mines and works are at Douglas Island. During the whole year the works were kept in operation night and day, and a large number of workmen were given employment at good wages. The amount of ore crushed was 239,633 tons, yielding $707,017.37 in gold, an average yield of $2.95 per ton. The cost of reduction averaged only $1.50 per ton, leaving a net profit of $1.45 per ton of ore crushed.

Dividends were paid during the year amounting to the sum of $450,000. The total operating cost of mining, milling, chlorination, general expenses, freights, insurance, and new machinery for the year was $359,280.33, and the profits for the year amounted to the sum of $361,980.16.

The Nowell Gold Mining Company, Thomas S. No-

well, president, has its home office in Boston. The Alaska office is in Juneau, and Frederick D. Nowell is agent. Their mines are at Silver Bow Basin, only about 5 miles from Juneau, and are both lode and placer. The quartz-lode business is in its initial stages. The company is now erecting a 20-stamp mill, which will be in operation in a few months. The placer business which should, perhaps, be called hydraulic mining, is in full operation. There are two mines, both in the basin, and the work is carried on night and day. These mines embrace quite a number of the original claims which the present owners purchased. A tunnel was excavated under the mountain which obstructs the entrance to the basin; water was brought from the high hills near in huge pipes, and "giants" were attached, which throw water with such force that it carries away the whole detachable surface, including sometimes quite large rocks, and washes the dirt, in a condition of a thin mud, through the long tunnel, in a flume on the bottom of which is strewn quicksilver to retain the fine gold, which settles to the bottom as the stream constantly flows on, until at certain periods the streams are stopped to allow a clean-up. The tunnels were completed in the spring of 1891, and since then the work of washing has been in operation. The company gives employment to 20 white men and 22 Indians. The former receive $2.50 per day and their board. Indian laborers receive $2.50 and board themselves. The hydraulic properties now being operated by the company were formerly owned by the Silver Bow Basin Company, and the quartz-lode claims by the Nowell Gold Mining Company, but the stockholders were identical and the management of the two companies has been consolidated under the style of the Nowell Gold Mining Company; capital, $2,000,000.

It is apparent that the surface gold in this rich basin was originally in the rocks and that disintegration took place by the action of the atmosphere and heat and cold, and perhaps glacial friction, and the precious minerals were freed from their matrices. When this surface is removed by the hydraulic process, why not expect the best results in quartz mining? Several enterprises have started on this theory and have the best prospects of success.

The facilities for performing the work of the Apollo

Consolidated Mining Co. have been considerably increased during the year. There have been added 5 stamps, 1 concentrator, 1 air-compressor, reservoir for water, with 26-inch iron pipe 1 mile in length from it to the mills, additional facilities for rock-cutting, and improvements in tramways. The ore is now carried from the upper level of the mine on a gravity tramway 1,685 feet to within 700 feet of the mill, from which point the cars are pushed by hand power. The mill has now 10 stamps, 2 concentrators, 2 grinding pans, 4 amalgamating pans, and 2 settlers, and reduces about 30 tons of rock per day. The general quality of the ore is fully maintained, and the quantity to justify a large mill is assured. Assays of the ore vary from $2.50 to $25. Milling tests prove that the quality is such that it can be worked profitably. The expense of mining and milling with the 10-stamp mill is at present about $4, which will be much reduced with a larger mill and improved facilities. When the lower tunnel is completed and less hard-rock work is required and experience has taught its lessons of economical working, it may be they will approximate the cheap processes of the Alaska Treadwell Gold Mining Company. This mine, like the other, is near tidewater, has the same advantages of moderate climatic conditions, and has ore which is easily mined. The concentrations contain both gold and silver, but largely gold.

The same geological and mineralogical formation extends across the island, some 8 or 9 miles. The width of the formation at the working point is about 1,000 feet, with syenite on the west and porphyry and porphyritic conglomerate on the east.

The Shumagin Mining Company at Squaw Harbor, on the same island, where there are 18 mining claims, has been doing no development work during the year, and their mill, 5 stamps, has been idle. The deposit has three parallel veins; the first, 57 feet, is low-grade ore; the second, 9 feet, would pay if worked economically; the third, 3½ feet, still richer. Some 300 tons of ore have been milled, realizing about $3.50 per ton. The harbor is fine, there is plenty of water for power, and the property is well situated for cheap working.

No development work has been done on any of the other mining claims in the Unga district.

In the Unalaska mining district no work has ever been done except that of prospecting. For this purpose a tunnel of 600 feet was excavated, but previously to the last year.

No report has been received of work done in the Fish River mining district, though parties have been there investigating. Considerable preliminary work has been done there formerly.

More activity has been displayed in the Portage Bay district. Eight quartz-lode claims have been filed in the local recorder's office. Only about 100 feet of tunneling has been cut, by way of prospecting and doing assessment work, on these claims. The ores found disclose the presence of both gold and silver. In this district is also situated the Herendeen Bay coal mine, the principal owners of which are members of the Alaska Commercial Company, of San Francisco.

A survey and careful inspection of the mine and the country about it has been made the present season by an expert, Mr. A. Barion, of San Francisco. He reports the deposit to be a first-class bituminous coal, resembling the English Cherry coal, of a quality superior to most of the coals found on the Pacific Coast —that at Conception, Chile, alone comparing with it.

About $50,000 has been already expended in the development of the business, a considerable portion of which necessarily belongs in the prospecting account. Buildings have been erected, including three blacksmith shops, a large boarding house, a storehouse, and a cabin, and a tramway extends from the beach to tunnel No. 2. The company has two lighters kept here, and the transportation steamers employed in their other business stop here on occasions. Seventy-nine feet of the tunnel is in the finest kind of coal. There are two veins parallel to each other, one 8 feet and the other 7 feet. There is much coal in sight which can be worked profitably. But the investigations prove that this particular section is broken, having been disturbed since the formation, and some of the satisfaction of working the mine will be wanting unless the key to the situation can be found so as to prevent the frequent losing of the leads and the expense and annoyance of seeking them again. Mr. Barion thinks he has it, however, in the large, level valley near, which does not appear to have been disturbed, the

original formation seeming to have been retained. Whether his theory is correct or not can be determined by boring, and if found to be so, the coal can be taken out with very little expense, and the work can be prosecuted through the year. The coal now in sight, it is estimated, can be got out at an expense of about $8 per ton.

The Sitka mining district was organized about sixteen years ago. The first mining operations in Alaska were commenced here. But little work has been done, however, except to comply with the assessment law. There is every reason for believing that the ores of this district are of the richest character, and assays have frequently disclosed fabulous results. Milling tests, which are more satisfactory, prove the value of the ores beyond question, though the high figures of some of the assays are not reached. The minerals found here are both gold and silver, though mostly the former. The two mills in the district have been idle for two years past.

Prospecting and development work have been done on the following properties:

On the Stewart mine a tunnel was run 250 feet in ore of sufficient richness to warrant high expectations.

The Lucky Chance, about 6 miles inland from the head of Silver Bay, has a tunnel 100 feet, and ore to a considerable amount has been milled with results which would have been satisfactory but for the unreasonable expense in mining, packing and milling. Some trouble in the company is alleged to be the cause of a cessation of the business.

The Silver Bay Mining Company ceased operations when a tunnel had been run about 100 feet. The assessment work is kept up by the company.

The Liberty mine has been worked on a limited scale during the season. The mine is favorably located near the water's edge on the west side of Silver Bay and has a deep-water front. The formation is 19 feet between walls and is talcose rock. The walls are distinctly defined and are slate on both sides. The formation, which consists of rich ore at the place of working, extends to the top and beyond of the high mountain in which it appears. Only a milling test has been sent away for reduction, and that showed about $11. This mine is conveniently located for cheap working

and the ores are friable and easily reduced. A large percentage of it comes out as free gold when crushed and the balance may be easily concentrated in sulphurets.

A shaft 50 feet deep has been sunk on the Haley & Rogers claim as a prospect only. The owner of the property considers it of great value.

A tunnel has been cut into the Wicked Fall ledge and assessment work is annually done. So of the mine Julia.

Assessment work is also done on the Eureka, the Tumtum, and the Billy Basin mine, which is said to yield $22 of silver to the ton. The latter is about 6 miles up Indian River.

A number of workmen have been employed about the coal claims of the Cleveland mining district in Cook's Inlet during the year, but very small results have been reported. It may be inferred that the time has not yet come for the development of the coal interests of that region.

EXTRACTS FROM REPORT OF GOVERNOR OF ALASKA—1894.

The modern discoveries in the manner and process of treating gold ores and the inventions of machinery applicable to the mining industry have rendered the manipulation of low-grade gold-bearing quartz easy, successful and profitable.

To these discoveries and inventions Alaska is largely indebted for the development and success of the extensive mining business now being carried on in the Territory. Some veins of rich gold-bearing quartz have been discovered within two years past; but most of the mines which were first worked to successful development in Alaska were mainly of low-grade ores, which are found in lodes of extensive dimensions.

The Alaska Treadwell Gold Mining Company appear to have an inexhaustible quantity of gold ore, which will yield from $3 to $4 per ton. The year ending May 31, 1894, 240,000 tons of ore were treated, yielding $768,000, or $3.20 per ton; cost of mining and milling, $324,000, or $1.35 per ton. Net profit, $444,000.

The Mexican mine, under the same management, on

the adjoining claim, runs 60 stamps with about the same results.

At Berners Bay the Comet mine, which is of high-grade ore, began milling the quartz in June last with satisfactory results. Mines are being operated and developed in all of the following mining districts: Sumdum, Snettishham, Grindstone Creek, Sheep Creek, Gold Creek, Lemon Creek, Montana Creek, Juneau mining district, all Douglas Island, Sitka, Unga and Kadiak.

The most successful mines are situated on the mainland belt or zone. This belt runs southeast and northwest. Beginning in Mexico, it passes in almost a straight line to the Arctic Ocean. Varying from 2 to 20 miles in width, it embraces some of the best mines in Mexico, the Western States and the Territory of Alaska. Douglas Island, Gold Creek, Berners Bay, and the placer mines of the Yukon Valley are on this belt. The most productive placers on Forty Mile and Miller creeks lie directly in its path.

We have no definite information from the mining camps in the Yukon country, but it is reported that there are about 1,000 miners in that locality, the majority of whom will remain there during this winter. A number of persons have gone into that district who have but little means and no experience in mining or other labor, and I fear that there will be much suffering for want of supplies.

I would recommend that the Government engineers be directed to survey and locate a wagon road to the boundary line of Alaska by the way of Chilkat Pass. The distance is greater, but the divide is much lower than by the Chilkoot trail.

EXTRACT FROM THE REPORT OF THE GOVERNOR OF ALASKA FOR 1895.

The amount of gold produced from the mines of this Territory during the past year has done much to confirm the opinion that Alaska is a profitable and will be a permanent mining country. Capitalists of experience in the business of mining gold from other fields have

visited this country and have become interested in the development of Alaska mining property.

In the Harris mining district at Juneau the Treadwell and Mexican have exceeded their product of last year, and the mines in the Silver Bow Basin have made more profitable returns. The Juneau Mining Company have erected a new quartz mill of 30-stamp capacity, driven by water power, and are now crushing 115 tons of rock each twenty-four hours, at a cost of $1.75 per ton. The Sheep Creek mine is a profitable ledge producing both silver and gold. The Sumdum mines, situated about 50 miles south of Juneau, have been developed during the past season and have proven to be a profitable investment.

Berner's Bay Mining and Milling Company's mines are situated in the Berner's Bay mining district, about 60 miles northwest of Juneau. These mines comprise a group of some 30 locations situated about 3 miles from the seacoast and connected therewith by a narrow-gauge railroad 2½ miles long and a wire tramway from the termination of the railroad to the Comet mine, and a surface gravity railroad from the Bear System to the mill. The mill is of 40 stamps, with a capacity of 120 tons a day, and the ore is gold-bearing of a high grade. The major portion of the gold is recovered in the batteries and on the plates, and the balance by concentration over vanners. Extensive development work is being carried forward with the view of enlarging the milling capacity in the near future, and the showing is most encouraging, generally speaking.

The Sitka mining district, on Baranoff Island, contains large deposits of gold-bearing quartz rock, on which a number of mining claims have been located and development work commenced. On the property of the Lucky Chance Mining Company, a 5-stamp mill has been erected, from which the product has been satisfactory. This will in the near future be an active mining camp.

The mining property of the Apollo Consolidated Mining Company is located on Unga Island, one of the Shumagin group, situated 1,000 miles westward from Sitka. This company has an unlimited amount of gold-bearing rock, favorably located near the water front of Unga Bay. By an expenditure of a large

amount of capital and labor, ably and skillfully managed, this mine has been brought to such a condition of excellence that it can be operated with great economy and large profit. Two thousand five hundred feet of tunnels, with tramways, have been completed, waterworks, steam compressor, offices and dwelling houses built, and lastly a 40-stamp quartz mill erected and put in operation. About 120 men are employed at the mine all the year through.

COOK'S INLET.

This is a placer mining district situated on the mainland 600 miles west of Sitka. For several years small amounts of fine gold have been found along the north Pacific Coast. In the fall of 1894 it was rumored that rich deposits of the precious metal had been discovered, and during the spring and summer of this year about 300 miners visited that locality for the purpose of working the placers of which they had heard such glowing reports. But they were doomed to disappointment, and failed to find gold in paying quantities. After enduring much hardship and privation they returned home and the placer mines of Cook's Inlet are deserted.

YUKON DISTRICT.

The valley of the Yukon River is without doubt the most extensive field of placer mines discovered since the finding of gold in California. The precious metal has been found at different places in the valley of this river, covering a distance of 800 miles. The great obstacles to successful mining in this district are the shortness of the season for actual work and the perpetually frozen ground. The earth requires to be thawed with fire before it can be mined. With these difficulties to contend with good prospects do not always yield favorable results.

Notwithstanding these unfavorable conditions, the long, cold winters and the long distance from the base of supplies, the Yukon country is destined to be a prolific gold-producing district. We have not ascertained the exact number of miners living in that part of Alaska, but from our best information we would estimate the number to be about 1,500. Except one in-

spector of customs, the Government of the United States has no official in that region.

The gold mines are 1,000 miles distant from Sitka, the capital of the Territory, with no way to reach there but by going over the mountain pass on foot and floating down the river in a canoe, and that only during one-half of the year.

This condition renders it entirely impracticable for civil government of the Territory to exercise any authority or administer the law either in the judicial or other departments in that part of the Territory. The pioneer gold miners are an honest, industrious and intelligent body of men, who never permit a crime to go unpunished or a good deed unrewarded. But this primitive condition will soon have passed and others than honest miners will assume to rule the country, and the restraints of law will be needed.

The Indians of the Yukon country are a harmless and peaceable people, and we fear no trouble from them; yet in the absence of all civil government I would suggest the propriety of the Government establishing a military post of one company of fifty men at some point in the Yukon Valley, to remain until the country is further developed and its needs become known. We would recommend the establishing of a mail route between Chilkat or Chilkoot to Circle City, in Alaska, the mail to be sent from each point once every two months.

EXTRACT FROM THE REPORT OF THE GOVERNOR OF ALASKA FOR 1896.

GOLD MINES.

Two million three hundred thousand dollars in gold bullion have been taken from the gold mines within the Territory of Alaska during the year ending October 1, 1896. The greater part of this amount is the product of low-grade ores, much of which yielded less than $4 per ton. The improved methods in mining and milling gold-bearing rock have so greatly reduced the expense that almost any grade of gold ores can be worked with a profit. One dollar and twenty-five cents per ton is the average cost of mining and milling the quartz rock at the Alaska Treadwell Gold Mining Com-

pany's mines on Douglas Island, Alaska. Hunting or prospecting for new mines has been very active during the year last past, and a number of good mines have been located. Several of these new ledges are being rapidly developed, and on some stamp mills have been erected and are operating with satisfactory results. Confidence in Alaska as a gold-producing country increases as her resources are developed.

SITKA DISTRICT.

A number of gold-bearing quartz ledges and placer deposits have been discovered in this district and several of them are being rapidly developed with good prospects. The "Pande Basin placer mine" is situated between high mountains about 8 miles from Sitka. About 150 acres of this placer are covered by the waters of a small lake. It is proposed to drain off the waters of this lake, which will enable the whole area to be mined.

PLACER MINES OF THE YUKON.

The gold placers of the Yukon region still continue to attract the attention of gold miners and fortune seekers. The summit of the Chilkat [Chilkoot] Pass lies 4,000 feet above sea level and is covered with perpetual snow. The route over this pass is usually the one taken in going into the Yukon country. It is only 25 miles over this pass from tide water on this side to Lake Linderman, one of the sources of the Yukon River, on the other side. When Lake Linderman is reached, the prospector constructs rafts and boats and continues his journey with them 800 miles down the river to the gold fields. One thousand men and 40 women, traveling on snowshoes, went over this route to the mines during this season. A large number of those who have gone to the Yukon region will not realize their expectations and will immediately return to their homes.

Mining in that frigid region is attended with so much difficulty and labor that only those of great experience and endurance can expect to succeed. No rich developments or discoveries have been reported from there at this writing. It is estimated, however, that this season's output will be fully up to that of last year. It would be well to establish a small military

post, or a police force, in that part of the Territory. The Canadian Government maintains a police force consisting of a company of 20 men, the captain of which is clothed with the powers of a trial magistrate. This company is located in the mining district, on the line between Alaska and British Columbia. It is reported that it is very efficient in punishing criminals and preventing disorderly conduct. Authority is exercised with fairness and discrimination, and is productive of great good on both sides of the line.

The following is quoted from my last year's report for general information:

Over the Pass.—The shortest, quickest and cheapest way to the Yukon.

The following table* shows the distances from Juneau to the various points named on the only practicable route to and down the great Yukon Basin, and is republished for the information of the scores of inquirers who weekly address the Mining Record upon the subject of the great auriferous regions of the far northwest. To them we would also say that outfits can be secured here more advantageously than at any other point, as long experience has taught our dealers the exact requirements, and their advice in the premises will be found invaluable.

This is no poor man's country; no one should arrive here with less than $500; the road is long, supplies are costly, seasons are short, and fortune fickle; failure to find gold the first season entails suffering upon those whose funds are insufficient to carry them through the long winter when absolutely nothing can be done; not one in a hundred makes a strike the first season.

Inexperienced persons, unless prepared for long-extended delays, should stay away; gold finding is a science which can be acquired only in its native fields, and the art must be mastered elsewhere, for in Alaska there is no time for pondering; action must be quick and sharp or the season is lost.

EXTRACT FROM REPORT OF GOVERNOR OF ALASKA FOR 1897.

In 1858 there occurred what is known as the Fraser River excitement, and this merged into the Cariboo

* See p. 308.

country, where large quantities of gold were obtained.

In 1862 gold was discovered upon the Stikine River in British Columbia, near the Alaska boundary line.

About the year 1867 Captain Lewis, of the Hudson Bay Company's steamer Otter, picked up a man who was wounded, hungry, and drifting in a canoe near Takou Harbor in the neighborhood of Stockdale Point. This man had some gold dust. His name was Culver. He had two partners, and the natives, attacking them, killed one.

He told the story of his discovery at Port Townsend, where a party fitted out and embarked on the schooner Louisa Downs. He said that he could take them to the place. They came to Sitka, replenished their stores, and proceeded to the neighborhood of the Takou; but Culver could not tell anything, for it all seemed a blank to him. They threatened to hang him, and then he lost his wits altogether.

He came back to Sitka, where he died a few years afterwards. He told his best friends, just before dying, that he had always told the truth about the gold, and that some day the place would be found.

In 1873 gold was discovered in the Cassiar district of British Columbia, and the entrance to it is up the Stikine River.

It was in the summer of this year that William Dunlap and some others started to prospect around Sitka. They found colors in Indian River, and at the falls a quartz ledge carrying mineral. At the head of Silver Bay, 10 miles from town, they found colors and float quartz in a stream. In following up the stream they found a branch of it flowing across a large quartz ledge.

Among the soldiers who were stationed here was Nicholas Haley. He had worked upon the mines in California and Nevada. When he saw this ore he became interested and found out all that he could learn. He and another soldier obtained a few days' leave, and they, with Edward Doyle, went to the ledge already discovered. Two blasts were put in, and about $300 worth of fine gold quartz specimens were blown out.

When Haley visited this ledge soon afterwards he went farther up the stream, and in about a quarter of a mile he came upon a fine cropping of quartz. When

the disintegrated surface was panned plenty of colors could be obtained. These were pronounced genuine discoveries, and are the first real discoveries of gold in Alaska.

Fort Wrangell was the entry port and headquarters of miners entering the Cassiar country.

In 1874 a number went prospecting on the main coast north from Wrangell, and discovered and worked placer ground at a place called Shuck, in Stephens Passage, and not far from Holkham Bay. A considerable amount of dust was taken from a few claims.

Alaska, at this time, was connected very closely with Oregon. The mail steamer hailed from there and the traders and merchants did nearly all of their business in Portland. The military officers came from Vancouver, only 14 miles from Portland. These officers took great interest in the quartz discoveries. It was quite natural, therefore, that the first mining company should be incorporated under the laws of Oregon, in Portland. This was on January 30, 1877, and it was known as the Alaska Gold and Silver Mining Company.

The mine was named Stewart Tunnel, after Major Stewart, who was then in command of the troops stationed at Sitka.

The Portland merchants controlled the stock. The work of development began, and in 1879 a 10-stamp mill was put up. But affairs were not managed well, and in the spring of 1880 the president of the company came up and shut down the works.

This turn left quite a number of men in the neighborhood of Sitka without employment. Two of these were Richard T. Harris and Joseph Juneau. They were outfitted by George E. Pilz, the superintendent of the Stewart Tunnel mine, and N. A. Fuller, storekeeper. Harris and Juneau struck out in the direction of Takou. In October they returned with quartz crammed with gold, and such a quantity as to leave no doubt as to the value of the discovery.

Steam launch, boats, canoes and steamers were made ready and there was a rush for Gastinaux Channel. Locations were made, both placer and quartz, along Gold Creek, and at its source, in Silver Bow Basin. A town was marked out, and some called it

Rockwell, after the popular executive officer of the Jamestown; others Harrisburg; but finally, at a miners' meeting in May, 1882, the name of Juneau was adopted.

The first winter was one of waiting.

Work began in earnest in 1881, and many thousands of dollars were washed out. New life was thus given to mining. Prospectors branched out in all directions. Douglas Island, across the channel from Juneau, received immediate attention, and considerable gold was cleaned up from claims upon the beach. Several hydraulic claims were located on top of what is now the Treadwell group.

Quartz locations were made upon this island in May, 1881. Mr. John Treadwell, of San Francisco, acquired for himself and others in the same city, a number of the locations by purchase. Development began by running two tunnels and erecting a 5-stamp mill. In due time, when there was no longer any doubt as to the extent and value of the ore, cost of transportation, timber, wood, and other problems which have to be considered in valuing a mine, a 240-stamp mill was erected with all of its accessories in the way of shops, water, and steam power, tracks, wharf, electric lights and chlorination works. The machinery is the best that can be obtained, and the greatest care has been taken in the construction of the whole plant. These works are not surpassed by anything similar in any mining country.

This Alaska Treadwell concern has given tone and backbone to mining in this far-off quarter of the globe. Day and night, month after month, year after year, these stamps have been dropping, and the smoke from the fires in the chlorination works has been wafted either up or down the channel.

The monthly shipments of bricks of bullion are arguments of great weight.

The Alaska Treadwell is 450 feet wide.

The company is sinking a shaft, and no doubt in the near future will erect a mill of more than twice the capacity of the present one.

Next comes the Alaska Mexican Gold Mining Company, under almost the same management as the Alaska Treadwell. This property is on Douglas Island and about a half mile south of the Alaska Treadwell;

At Funter Bay, Admiralty Island, the Boston-Alaska Gold Mining Company have a 10-stamp mill, which is operated by water power. There are 42 claims. This year they have been doing development work.

At Silver Bow Basin a 400-foot tunnel is being run on the Perseverance by Wisconsin parties.

The Ebner mill has 10 stamps, and is run the year through by water power.

The Webster mill has 5 stamps, but is idle most of the time.

The London Exploration Company bought out the Lane & Hayward Company, and are running 35 stamps and turning out bullion at a profit.

At the Yankee Basin is the Aurora Borealis, owned by S. P. Earle & Co. They are erecting a 5-stamp mill, to run by steam. Considerable development work has been done, and the ore is very promising.

Montana Creek: Claims held by Juneau people; development work in progress. There are more than twenty claims, and they are about 7 miles from salt water. There is a trail and wagon road. The ore assays well.

In the Berner's Bay district are the Horrible and Mexican claims, owned by the Portland-Alaska Gold Mining Company. There are 300 feet and more of tunneling, several inclines, and a 10-stamp mill close to salt water. A wire tramway 10,000 feet long connects the mine with the mill. One hundred thousand dollars has already been spent upon it.

Another mine in this neighborhood is the Jualin, a word made up of the first syllables of the words Juneau, Alaska, and Indiana. They have a 10-stamp mill. The vein is from 3 to 6 feet, and the yield in gold exceeds $10 per ton, and there is enough ore in sight to keep the mill going for a long while. There is no stock for sale. The short history of the management of this mine is worthy of study. It is surely one of the neatest and cleanest pieces of work that has been done in Alaska.

Claims have been located and houses built in the Mendenhall district, and a company organized to begin work. Many claims are undergoing development on Snettisham Bay, but no mill has been built.

The Bald Eagle is a noted mine. Nearly $200,000 was taken out with 11 months' run with a 4-stamp mill.

Last year they cleaned up $96,000 in 167 days' run. One thousand seven hundred feet of tunnel has struck the ledge 350 feet deep, the mill ore running from $48 to $53 per ton. In the vicinity of the Bald Eagle is the Sum Dum Chief. A 10-stamp mill is in process of erection, to be run by water or steam. There is an electric plant to run the hoist and air compressor. They have 4,000 feet of wire tramway from the mill to the mine, along the side of the mountain, 1,500 feet above the mill. Mine is well developed, with tunnels and winzes.

Three or four claims are under development near Shuck, where there was placer mining in 1874.

Locations have been made upon Gravina Island and around Boca de Quadra.

There were 380 mining claims recorded at Juneau last year.

One of the largest enterprises in the Territory is the Apollo Consolidated Mining Company, upon Unga Island. The company is composed of San Francisco people. They have spent $375,000 in development and construction. They run a 40-stamp mill and concentrators. The monthly yield of gold is $30,000 and more. It pays the company to ship the concentrates, rather than treat them on the ground, on account of the high price of fuel.

So far but little silver has been found. Sheep Creek, near Juneau, is the only place where it is produced. Rich silver ore has been found north of Golovnin Bay, and attempts have been made to ship the ore, but they proved sadly disastrous.

YUKON VALLEY.

Cassiar miners who would spend their winters at Victoria, Fort Wrangell and Sitka, would often express a desire and a determination to prospect the headwaters of the Yukon. The passes were held by the Chilkats, a tribe noted for its willingness to fight in order to maintain their monopoly of the fur trade with the interior people. They were extremely jealous of the white men going in, for they would cultivate wrong notions in the minds of the Stick Indians. In May, 1878, a party left Sitka with their outfits on a small steamer. These Chilkats had many questions to ask,

and were saucy. These adventurers did not deem it safe to take the risk, so they got up steam and left early in the morning, and returned to Sitka. Two years afterwards parties did cross, and went down a distance, but they came out in the fall.

In 1882 large numbers went in over the Dyea trail, and the same year Ed. Schieffelin and brother built a steamer for the Yukon, and with a party of five went up the river to Nulukilt, where they wintered. The next season they prospected until August. They found coarse gold everywhere. A short distance beneath the surface they found the ground frozen. The miners were well rewarded by working the bars on Stewart River and its tributaries before 1885.

Franklin discovered coarse gold on Forty Mile Creek in the fall of 1886. This is in Alaska Territory. There was a rush from Stewart River to this stream and its branches, and they have been worked every year since. While Sixty Mile Creek and Forty Mile Creek pass over into British soil, nearly all of the gold diggings are on the American side of the line. Circle City was founded in the fall of 1894. It is the depot for supplies to the miners upon Birch Creek and its forks. Gold was found the previous year, 1893. Thus, year after year, the field has been widening and more men have been attracted, and they go in expecting to remain several years. But the miner is handicapped. The want of supplies and transportation facilities is what discourages him. If he waits till the river opens and the boats come up, his time is consumed. If he starts out with a dog team, he knows that his grub will last so many days and no longer, and to go farther and trust to his gun would be tempting fate. This is the great problem for the Yukon, namely, how to get supplies there and sell them at profits not akin to robbery, and how to distribute them to any river, creek or gulch where men are at work. Capital put into enterprises with such ends in view will be rewarded richly.

KLONDIKE.

The discovery of gold upon this branch of the Yukon in August, 1896, by George Cormack, was no doubt largely by accident. However that may be, it has stirred up the world. The shipments of gold by the

steamer told the story. Thousands started at once, and thousands more are waiting to be more certain, and it is well that they have done so. Shipload after shipload of gold-seekers and their freight has been rushed to the extreme limit of salt-water navigation, and there they have been literally dumped upon the beach, some above high water and many below, as they learned to their sorrow when the water covered them when they slept. Miners' meetings were held upon the ships on the way up and about every two hours after, they were piled upon the beach. Some said Dyea was best, many held out for Skugua. [Skagway]. It may be well to explain that there are three passes over the coast range of mountains in the neighborhood of Lynn Canal, which is the extreme limit of salt water in a northerly direction. The one which has always been used by the Chilkats, and by the early prospectors and miners, and who are now looked upon as old-timers, is the Chilkoot Pass, or, as it is more frequently called, the Dyea Pass. West of this the Chilkat River is ascended, and on this route is the Chilkat Pass and Dalton Trail.

Now, about 3 miles below where the Dyea waters empty, and on the east shore, is another stream which has filled up a bight of the coast with sand and gravel, which forms a flat between the mountain walls. The natives call this stream Skugua [Skagway]. Parties from Victoria have been seeking for a pass to the Northwest Territory, and Capt. William Moore, who has been a pioneer in every camp since 1888, especially in steamboating, persuaded these people to take hold of this pass. Moore's son located 160 acres under the law of 1891. A company was organized and they were proceeding to build a sawmill and a wharf, and intended to open a trail, but when the ships arrived with gold-seekers, they were simply overwhelmed. The miners paid no attention to former locations, but went ahead and laid out a town and elected a recorder.

More than eleven hundred locations have been made, and now the town of tents is giving way to the town of frame houses. The trail was not open, and even the correct distance was not known before the eager throng were crowding with horses, goats, oxen, and mules, hitched to carts, wagons and drags, and carrying pack saddles loaded with flour, bacon, beans, dried

apples and hay. Already the saloon and dance hall were up and ready for patrons. Tons of stuff were scattered over the beach, and shiploads strung along the trail. These men have had a terrible time, but they are brave, and started out to endure hardships. Take them as a class, they would rank far above the average manhood of the country. By hard work and bull-dog tenacity and perseverance some outfits went over the Skugua [Skagway] trail and White Pass to the lakes and down the river. If this pass is improved and kept open during the winter it may be possible to put over hundreds of tons of provisions and have them ready at the lakes for the break-up in the spring.

Skugua [Skagway] is being built up rapidly. Lumber is in demand, and lots are selling as high as $1,500. No natives were at work on this trail. Those who took the Dyea trail had no hindrance. The price of packing went up to $40 per hundred from salt water to the lake. Most of those who got in went over this trail. The Chilkat or Dalton trail is the most westerly. It avoids the lakes, canyon, rapids, etc., by keeping to the left, and comes out far down on the river. It is over this trail that they drive in horses and cattle. Americans are anxious to secure a route to the Yukon which shall be entirely upon the United States territory. Different parties are now out, and are carefully examining the mountains between Yakutat and Cook Inlet. It is to be hoped that they may succeed and report their discovery yet this fall. This is the third season of the work in Cook Inlet. The excitement over the Klondike has drawn many away from that district; nevertheless, the output of gold this year will be no mean sum. The possibilities of the whole region bordering upon this inlet and upon Prince William Sound will draw crowds of adventurers in the near future.

COPPER.

But little more can be said of copper than has already been quoted from the early navigators. The Copper River natives bring bullets made of it. A number of locations have already been made upon Prince William Sound, and representatives of the large copper-producing plants are on the ground, but there will be no development before another season.

MARBLE.

This is found in many localities, but heretofore but little attention has been given to it. The Russians at Sitka used to make excellent lime from marble obtained on Halleck Island, about 14 miles north of town. This year a number of locations have been made and parties are exploiting it in the East.

IRON.

Nobody is looking after this metal just now.

COAL.

The best that is in print on this subject is the report on coal and lignite of Alaska by William Healey Dall, United States Geological Survey. His report will show how well distributed the coal croppings are and how little development work has been done. Alaska is becoming a large consumer of coal, and nearly all that is now used comes from Vancouver Island, British Columbia. This increasing demand will cause more attention to be given to the coal fields in the near future.

COAL OIL.

It has long been known that coal oil has been floating upon the waters around Prince William Sound. Parties have now taken this matter in hand, and it will doubtless be well inquired into during the next year.

Enough has now been said to convince a skeptic that Alaska is the most promising mineral field that is in the possession of the United States, or within the possession of any other country. The Yukon and its tributaries are the ideal diggings for poor men. The gold is all frozen and it takes muscular power to get it out. In fact, a new kind of mining has been developed. The best work is done in the winter, when fires are kept going upon the frozen earth. As it thaws it is scraped up and piled in heaps, where it remains until washing time in the spring.

The individual miner has his chance to make a stake as well as any company or corporation.

EXTRACTS FROM REPORT OF MR. OGILVIE, TO DOMINION GOVERNMENT.

While at Juneau I heard reports of a low pass from the head of Chilkoot Inlet to the head waters of the Lewes River. During the time I was at the head of Taiya Inlet I made inquiries regarding it, and found that there was such a pass, but could learn nothing definite about it from either whites or Indians. As Capt. Moore, who accompanied me, was very anxious to go through it, and as the reports of the Taiya Pass indicated that no wagon road or railroad could ever be built through it, while the new pass appeared, from what little knowledge I could get of it, to be much lower and possibly feasible for a wagon road, I determined to send the captain by that way, if I could get an Indian to accompany him. This, I found, would be difficult to do. None of the Chilkoots appeared to know anything of the pass, and I concluded that they wished to keep its condition and existence a secret. The Tagish, or Stick Indians, as the interior Indians are locally called, are afraid to do anything in opposition to the wishes of the Chilkoots; so it was difficult to get any of them to join Capt. Moore; but after much talk and encouragement from the whites around, one of them named "Jim" was induced to go. He had been through this pass before, and proved reliable and useful. The information obtained from Capt. Moore's exploration I have incorporated in my plan of the survey from Taiya Inlet, but it is not as complete as I would have liked. I have named this pass "White Pass," in honor of the late Hon. Thos. White, Minister of the Interior, under whose authority the expedition was organized. Commencing at Taiya Inlet, about two miles south of its north end, it follows up the valley of the Skagway River to its source, and thence down the valley of another river which Capt. Moore reported to empty into the Takone or Windy Arm of Bove Lake (Schwatka.) Dr. Dawson says this stream empties into Taku Arm, and in that event Capt. Moore is mistaken.

After getting all of my outfit over to the foot of Lake Lindeman, I set some of the party to pack it to the head of Lake Bennet. The stream between these

two lakes is too shallow and rough to permit of canoe navigation, and everything had to be portaged the greater part of the way.

The survey was completed to the canon on the 20th of July. There I found the party with the large boat, had arrived on the 18th, having carried a part of the supplies past the canon, and were awaiting my arrival to run through it with the rest in the boat. Before doing so, however, I made an examination of the canon. The rapids below it, particularly the last rapid of the series (called the White Horse by the miners) I found would not be safe to run. I sent two men through the canon in one of the canoes to await the arrival of the boat, and to be ready in case of an accident to pick us up. Every man in the party was supplied with a life-preserver, so that should a casualty occur we would all have floated. Those in the canoe got through all right; but they would not have liked to repeat the trip. They said the canoe jumped about a great deal more than they thought it would, and I had the same experience when going through in the boat.

The passage through is made in about three minutes, or at the rate of about 12½ miles an hour. If the boat is kept clear of the sides, there is not much danger in high water; but in low water there is a rock in the middle of the channel, near the upper end of the canon, that renders the passage more difficult. I did not see this rock myself, but got my information from some miners I met in the interior, who described it as being about 150 yards down from the head and a little to the west of the middle of the channel. In low water it barely projects above the surface. When I passed through there was no indication of it, either from the bank above or from the boat.

The distance from the head to the foot of the canon is five-eighths of a mile. There is a basin about midway in it about 150 yards in diameter. This basin is circular in form, with steep, sloping sides about 100 feet high. The lower part of the canon is much rougher to run through than the upper part, the fall being apparently much greater. The sides are generally perpendicular, about 80 to 100 feet high, and consist of basalt, in some places showing hexagonal columns.

The White Horse Rapids are about three-eighths of a mile long. They are the most dangerous rapids on the river, and are never run through in boats except by accident. They are confined by low basaltic banks, which, at the foot, suddenly close in and make the channel about 30 yards wide. It is here the danger lies, as there is a sudden drop, and the water rushes through at a tremendous rate, leaping and seething like a cataract. The miners have constructed a portage road on the west side, and put down rollways in some places on which to shove their boats over. They have also made some windlasses with which to haul their boats up hill, notably one at the foot of the canon. This roadway and the windlasses must have cost them many hours of hard labor. Should it ever be necessary, a tramway could be built past the canon on the east side with no great difficulty. With the exception of the Five-Finger Rapids, these appear to be the only serious rapids on the whole length of the river.

Five-Finger Rapids are formed by several islands standing in the channel and backing up the water so much as to raise it about a foot, causing a swell below for a few yards. The islands are composed of a conglomerate rock, similar to the cliffs on each side of the river, whence one would infer that there has been a fall here in past ages. For about two miles below the rapids there is a pretty swift current, but not enough to prevent the ascent of a steamboat of moderate power, and the rapids themselves I do not think would present any serious obstacle to the ascent of a good boat. In very high water, warping might be required. Six miles below these rapids are what are known as "Rink Rapids." This is simply a barrier of rocks, which extends from the westerly side of the river about half way across. Over this barrier there is a ripple which would offer no great obstacle to the descent of a good canoe. On the easterly side there is no ripple, and the current is smooth and the water apparently deep. I tried with a 6-foot paddle, but could not reach the bottom.

SURVEY OF FORTY MILE RIVER FROM ITS MOUTH TO THE INTERNATIONAL BOUNDARY.

During the progress of this work the weather was cold, and as the days were only four or five hours long, the progress was necessarily slow, so that I did not complete the survey to the boundary until the 12th. The distance from the mouth of the Forty Mile River up it to the boundary is, by the river, twenty-three miles. I marked the intersection of the river by the boundary by blazing trees on both sides and marked on some of the trees the letters "A" and "C" on the west and east sides, respectively, for Alaska and Canada.

The natural features of the ground here afford also a good mark. On the north side of the river two small creeks fall into the Forty Mile River, almost together, and between them there is a sharp rocky mound about 150 feet high. [Boundary Butte]. This mound stands where the boundary crosses the river, and from this point one can see northwards up the valleys of the creek for several miles. This is the first place on the river where such a distant view can be had.

DESCRIPTION OF THE YUKON, ITS AFFLUENT STREAMS, AND THE ADJACENT COUNTRY.

I will now give, from my own observation and from information received, a more detailed description of the Lewes River, its affluent streams, and the resources of the adjacent country.

For the purpose of navigation a description of the Lewes River begins at the head of Lake Bennet. Above that point, and between it and Lake Lindeman, there is only about three-quarters of a mile of river, which is not more than fifty or sixty yards wide, and two or three feet deep, and is so swift and rough that navigation is out of the question.

Lake Lindeman is about five miles long and half a mile wide. It is deep enough for all ordinary pur-

poses. Lake Bennet is twenty-six and a quarter miles long, for the upper fourteen of which it is about half a mile wide. About midway in its length an arm comes in from the west, which Schwatka appears to have mistaken for a river, and named Wheaton River. This arm is wider than the other arm down to that point, and is reported by Indians to be longer and heading in a glacier which lies in the pass at the head of Chilkoot inlet. This arm is, as far as seen, surrounded by high mountains, apparently much higher than those on the arm we traveled down. Below the junction of the two arms the lake is about one and a half miles wide, with deep water. Above the forks the water of the east branch is muddy. This is caused by the streams from the numerous glaciers on the head of the tributaries of Lake Lindeman.

A stream which flows into Lake Bennet at the southwest corner is also very dirty and has shoaled quite a large portion of the lake at its mouth. The beach at the lower end of this lake is comparatively flat and the water shoal. A deep, wide valley extends northwards from the north end of the lake, apparently reaching to the canon, or a short distance above it. This may have been originally a course for the waters of the river. The bottom of the valley is wide and sandy, and covered with scrubby timber, principally poplar and pitch-pine. The waters of the lake empty at the extreme northeast angle through a channel not more than one hundred yards wide, which soon expands into what Schwatka called Lake Nares. [The connecting waters between Lake Bennet and Tagish Lake constitute what is now called Caribou Crossing.] Through this narrow channel there is quite a current, and more than 7 feet of water, as a 6 foot paddle and a foot of arm added to its length did not reach the bottom.

The hills at the upper end of Lake Lindeman rise abruptly from the water's edge. At the lower end they are neither so steep nor so high.

Lake Nares is only two and a half miles long, and its greatest width is about a mile; it is not deep, but is navigable for boats drawing 5 or 6 feet of water; it is separated from Lake Bennet by a shallow sandy point of not more than 200 yards in length.

No streams of any consequence empty into either of

these lakes. A small river flows into Lake Bennet on the west side, a short distance north of the fork, and another at the extreme northwest angle, but neither of them is of any consequence in a navigable sense.

Lake Nares flows through a narrow curved channel into Bove Lake (Schwatka). This channel is not more than 600 or 700 yards long, and the water in it appears to be sufficiently deep for boats that could navigate the lake. The land between the lakes along this channel is low, swampy, and covered with willows, and, at the stage in which I saw it, did not rise more than 3 feet above the water. The hills on the southwest side slope up easily, and are not high; on the north side the deep valley already referred to borders it; and on the east side the mountains rise abruptly from the lake shore.

Bove Lake (called Tagish Lake by Dr. Dawson) is about a mile wide for the first two miles of its length, when it is joined by what the miners have called the Windy Arm. One of the Tagish Indians informed me they called it Takone Lake. Here the lake expands to a width of two miles for a distance of some three miles, when it suddenly narrows to about half a mile for a distance of a little over a mile, after which it widens again to about a mile and a half or more.

Ten miles from the head of the lake it is joined by the Taku Arm from the south. This arm must be of considerable length, as it can be seen from a long distance, and its valley can be traced through the mountains much farther than the lake itself can be seen. It is apparently over a mile wide at its mouth or junction.

Dr. Dawson includes Bove Lake and these two arms under the common name of Tagish Lake. This is much more simple and comprehensive than the various names given them by travelers. These waters collectively are the fishing and hunting grounds of the Tagish Indians, and as they are really one body of water, there is no reason why they should not be all included under one name.

From the junction with Taku Arm to the north end of the lake the distance is about six miles, the greater part being over two miles wide. The west side is very flat and shallow, so much so that it was impossible in many places to get our canoes to the shore, and quite

a distance out in the lake there was not more than 5 feet of water. The members of my party who were in charge of the large boat and outfit went down the east side of the lake and reported the depth about the same as I found on the west side, with many large rocks. They passed through it in the night in a rain storm, and were much alarmed for the safety of the boat and provisions. It would appear that this part of the lake requires some improvement to make it in keeping with the rest of the water system with which it is connected.

Where the river debouches from it, it is about 150 yards wide, and for a short distance not more than 5 or 6 feet deep. The depth is, however, soon increased to 10 feet or more, and so continues down to what Schwatka calls Marsh Lake. The miners call it Mud Lake, but on this name they do not appear to be agreed, many of them calling the lower part of Tagish or Bove Lake "Mud Lake," on account of its shallowness and flat muddy shores, as seen along the west side, the side nearly always traveled, as it is more sheltered from the prevailing southerly winds. The term "Mud Lake" is, however, not applicable to this lake, as only a comparatively small part of it is shallow or muddy; and it is nearly as inapplicable to Marsh Lake, as the latter is not markedly muddy along the west side, and from the appearance of the east shore one would not judge it to be so, as the banks appear to be high and gravelly.

Marsh Lake is a little over 19 miles long, and averages about two miles in width. I tried to determine the width of it as I went along with my survey, by taking azimuths of points on the eastern shore from different stations of the survey; but in only one case did I succeed, as there were no prominent marks on that shore which could be identified from more than one place. The piece of river connecting Tagish and Marsh Lakes is about five miles long, and averages 150 to 200 yards in width, and, as already mentioned, is deep, except for a short distance at the head. On it are situated the only Indian houses to be found in the interior with any pretention to skill in construction. They show much more labor and imitativeness than one knowing anything about the Indian in his native state would expect. The plan is evidently taken

from the Indian houses on the coast, which appear to me to be a poor copy of the houses which the Hudson's Bay Company's servants build around their trading posts. These houses do not appear to have been used for some time past, and are almost in ruins. The Tagish Indians are now generally on the coast, as they find it much easier to live there than in their own country. As a matter of fact, what they make in their own country is taken from them by the Coast Indians, so that there is little inducement for them to remain.

The Lewes River, where it leaves Marsh Lake, is about 200 yards wide, and averages this width as far as the canon. I did not try to find bottom anywhere as I went along, except where I had reason to think it shallow, and there I always tried with my paddle. I did not anywhere find bottom with this, which shows that there is no part of this stretch of the river with less than six feet of water at medium height, at which stage it appeared to me the river was at that time.

From the head of Lake Bennet to the canon the corrected distance is ninety-five miles, all of which is navigable for boats drawing 5 feet or more. Add to this the westerly arm of Lake Bennet, and the Takone or Windy Arm of Tagish Lake, each about fifteen miles in length, and the Taku Arm of the latter lake, of unknown length, but probably not less than thirty miles, and we had a stretch of water of upwards of one hundred miles in length, all easily navigable; and, as has been pointed out, easily connected with Taiya Inlet through the White Pass.

No streams of any importance enter any of these lakes so far as I know. A river, called by Schwatka "McClintock River," enters Marsh Lake at the lower end from the east. It occupies a large valley, as seen from the westerly side of the lake, but the stream is apparently unimportant. Another small stream, apparently only a creek, enters the southeast angle of the lake. It is not probable that any stream coming from the east side of the lake is of importance, as the strip of country between the Lewes and Teslintoo is not more than thirty or forty miles in width at this point.

The Taku Arm of Tagish Lake is, so far, with the exception of reports from Indians, unknown; but it is equally improbable that any river of importance

enters it, as it is so near the source of waters flowing northwards. However, this is a question that can only be decided by a proper exploration. The canon I have already described, and will only add that it is five-eighths of a mile long, about 100 feet wide, with perpendicular banks of basaltic rock from 60 to 100 feet high.

Below the canon proper there is a stretch of rapids for about a mile; then about half a mile of smooth water, following which are the White Rapids, which are three-eighths of a mile long, and unsafe for boats.

The total fall in the canon and succeeding rapids was measured and found to be 32 feet. Were it ever necessary to make this part of the river navigable it will be no easy task to overcome the obstacles at this point; but a tram or railway could, with very little difficulty, be constructed along the east side of the river past the canon.

For some distance below the White Horse Rapids the current is swift and the river wide, with many gravel bars. The reach between these rapids and Lake Labarge, a distance of twenty-seven and a half miles, is all smooth water, with a strong current. The average width is about 150 yards. There is no impediment to navigation other than the swift current, and this is no stronger than on the lower part of the river, which is already navigated; nor is it worse than the Saskatchewan and Red Rivers in the more eastern part of our territory.

About midway in this stretch the Tahkeena River (formerly used by the Chilkat Indians as a means of reaching the interior, but never by the miners, owing to the distance from the sea to its head) joins the Lewes. This river is, apparently, about half the size of the latter. Its waters are muddy, indicating its passage through a clayey district. I got some indefinite information about this river from an Indian who happened to meet me just below its mouth, but I could not readily make him understand me, and his replies were a compound of Chinook, Tagish, and signs, and therefore largely unintelligible. From what I could understand with any certainty, the river was easy to descend, there being no bad rapids, and it came out of a lake much larger than any I had yet passed.

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Lake Labarge is thirty-one miles long. In the upper thirteen it varies from three to four miles in width; it then narrows to about two miles for a distance of seven miles, when it begins to widen again, and gradually expands to about two and a half or three miles, the lower six miles of it maintaining the latter width. The survey was carried along the western shore, and while so engaged I determined the width of the upper wide part by triangulation at two points, the width of the narrow middle part at three points, and the width of the lower part at three points. Dr. Dawson on his way out made a track survey of the eastern shore. The western shore is irregular in many places, being indented by large bays, especially at the upper and lower ends. These bays are, as a rule, shallow, more especially those at the lower end.

Just above where the lake narrows in the middle there is a large island. It is three and a half miles long and about half a mile in width. It is shown on Schwatka's map as a peninsula, and called by him Richtofen Rocks. How he came to think it a peninsula I cannot understand, as it is well out in the lake; the nearest point of it to the western shore is upwards of a half a mile distant, and the extreme width of the lake here is not more than five miles, which includes the depth of the deepest bays on the western side. It is therefore difficult to understand that he did not see it as an island. The upper half of this island is gravelly, and does not rise very high above the lake. The lower end is rocky and high, the rock being of a bright red color.

At the lower end of the lake there is a large valley extending northwards, which has evidently at one time been the outlet of the lake. Dr. Dawson has noted it and its peculiarities. His remarks regarding it will be found on pages 156-160 of his report entitled "Yukon District and Northern portion of British Columbia," published in 1889.

The width of the Lewes River as it leaves the lake is the same as at its entrance, about 200 yards. Its waters when I was there were murky. This is caused by the action of the waves on the shore along the lower end of the lake. The water at the upper end and at the middle of the lake is quite clear, so much

so that the bottom can be distinctly seen at a depth of 6 or 7 feet. The wind blows almost constantly down this lake, and in a high wind it gets very rough. The miners complain of much detention owing to this cause, and certainly I cannot complain of a lack of wind while I was on the lake. This lake was named after one Mike Labarge, who was engaged by the Western Union Telegraph Company, exploring the river and adjacent country for the purpose of connecting Europe and America by telegraph through British Columbia, and Alaska, and across Bering Strait to Asia, and thence to Europe. This exploration took place in 1867, but it does not appear that Labarge then, nor for some years after, saw the lake called by his name. The successful laying of the Atlantic cable in 1866 put a stop to this project, and the exploring parties sent out were recalled as soon as word could be got to them. It seems that Labarge had got up as far as the Pelly before he received his recall; he had heard something of a large lake some distance further up the river, and afterwards spoke of it to some traders and miners who called it after him.

After leaving Lake Labarge the river, for a distance of about five miles, preserves a generally uniform width and an easy current of about four miles per hour. It then makes a short turn round a low gravel point, and flows in exactly the opposite of its general course for a mile, when it again turns sharply to its general direction. The current around this curve and for some distance below it—in all four or five miles—is very swift. I timed it in several places and found it from six to seven miles an hour. It then moderates to four or five, and continues so until the Teslintoo River is reached, thirty-one and seven-tenths miles from Lake Labarge. The average width of this part of the river is about 150 yards, and the depth is sufficient to afford passage for boats drawing at least 5 feet. It is, as a rule, crooked, and consequently a little difficult to navigate.[1]

1 The limited amount of prospecting that has been done on this river is said to be very satisfactory, fine gold having been found in all parts of the river. The lack of supplies is the great drawback to its development, and this will not be overcome to any extent until by some means heavy freight can be brought over the coast range to the head of the river. Indeed,

The Teslintoo was so called by Dr. Dawson—this, according to information obtained by him, being the Indian name. It is called by the miners "Hootalinkwa" or "Hotalinqua," and was called by Schwatka, who appears to have bestowed no other attention to it, the Newberry, although it is apparently much larger than the Lewes. This was so apparent that in my interim reports I stated it as a fact. Owing to circumstances already narrated, I had not time while at the mouth to make any measurements to determine the relative size of the rivers; but on his way out Dr. Dawson made these measurements, and his report, before referred to, gives the following values of the cross sections of each stream: Lewes, 3,015 feet; Teslintoo, 3,809 feet. In the same connection he states that the Lewes appeared to be about 1 foot above its lowest summer level, while the Teslintoo appeared to be at its lowest level. Assuming this to be so, and taking his widths as our data, it would reduce his cross section of the Lewes to 2,595 feet. Owing, however, to the current in the Lewes, as determined by Dr. Dawson, being just double that of the Teslintoo, the figures being 5.68 and 2.88 miles per hour, respectively, the discharge of the Lewes, taking these figures again, is 18,644 feet, and of the Teslintoo 11,436 feet. To reduce the Lewes to its lowest level the doctor says would make its discharge 15,600 feet.

The water of the Teslintoo is of a dark brown color, similar in appearance to the Ottawa River water, and a little turbid. Notwithstanding the difference of volume of discharge, the Teslintoo changes completely the character of the river below the junction, and a person coming up the river would, at the forks, unhesitatingly pronounce the Teslintoo the main stream. The water of the Lewes is blue in color, and at the time I speak of was somewhat dirty—not enough so, however, to prevent one seeing to a depth of two or three feet.

owing to the difficulties attending access and transportation, the great drawback to the entire Yukon district at present is the want of heavy mining machinery and the scarcity of supplies. The government being aware of the requirements and possibilities of the country, has undertaken the task of making preliminary surveys for trails and railroads, and no doubt in the near future the avenue for better and quicker transportation facilities will be opened up.

Between the Teslintoo and the Big Salmon, so called by the miners, or D'Abbadie by Schwatka, the distance is thirty-three and a half miles, in which the Lewes preserves a generally uniform width and current. For a few miles below the Teslintoo it is a little over the ordinary width, but then contracts to about two hundred yards which it maintains with little variation. The current is generally from four to five miles per hour.

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Just below the Big Salmon the Lewes takes a bend of nearly a right angle. Its course from the junction with the Tahkeena to this point is generally a little east of north; at this point it turns to nearly west for some distance. Its course between here and its confluence with the Pelly is northwest, and, I may add, it preserves this general direction down to the confluence with the Porcupine. The river also changes in another respect; it is generally wider, and often expands into what might be called lakes, in which are islands. Some of the lakes are of considerable length, and well timbered.

To determine which channel is the main one, that is, which carries the greatest volume of water, or is best available for the purposes of navigation, among these islands, would require more time than I could devote to it on my way down; consequently I cannot say more than that I have no reason to doubt that a channel giving six feet or more of water could easily be found. Whenever, in the main channel, I had reason to think the water shallow, I tried it with my paddle, but always failed to find bottom, which gives upwards of six feet. Of course I often found less than this, but not in what I considered the main channel.

Thirty-six and a quarter miles below the Big Salmon, the Little Salmon—the Daly of Schwatka—enters the Lewes. This river is about 60 yards wide at the mouth, and not more than two or three feet in depth. The water is clear and of a brownish hue; there is not much current at the mouth, nor as far as can be seen up the stream. The valley, which from the mouth, does not appear extensive, bears northeast for some distance, when it appears to turn more to the east. Six or seven miles up, and apparently on the north side, some high cliffs of red rock, apparently

granite, can be seen. It is said that some miners have prospected this stream, but I could learn nothing definite about it.

Lewes River makes a turn here to the southwest, and runs in that direction six miles, when it again turns to the northwest for seven miles, and then makes a short, sharp turn to the south and west around a low sandy point, which will, at some day in the near future, be cut through by the current, which will shorten the river three or four miles.

Eight miles below Little Salmon River, a large rock called the Eagle's Nest, stands up in a gravel slope on the easterly bank of the river. It rises about five hundred feet above the river, and is composed of a light gray stone. What the character of this rock is I could not observe, as I saw it only from the river, which is about a quarter of a mile distant. On the westerly side of the river there are two or three other isolated masses of apparently the same kind of rock. One of them might appropriately be called a mountain; it is southwest from the Eagle's Nest and distant from it about three miles.

Thirty-two miles below Eagle's Nest Rock, Nordenskiold River enters from the west. It is an unimportant stream, being not more than one hundred and twenty feet wide at the mouth, and only a few inches deep. The valley, as far as can be seen, is not extensive, and, being very crooked, it is hard to tell what its general direction is.

The Lewes, between the Little Salmon and the Nordenskiold, maintains a width of from two to three hundred yards, with an occasional expansion where there are islands. It is serpentine in its course most of the way, and where the Nordenskiold joins it is very crooked, running several times under a hill, named by Schwatka Tantalus Butte, and in other places leaving it, for a distance of eight miles. The distance across from point to point is only half a mile.

Below this to Five Finger Rapids, so called from the fact that five large masses of rock stand in midchannel, the river assumes its ordinary straightness and width, with a current from four to five miles per hour. I have already described Five Finger Rapids; I do not think they will prove anything more than a

slight obstruction in the navigation of the river. A boat of ordinary power would probably have to help herself up with windlass and line in high water.

Below the rapids, for about two miles, the current is strong—probably six miles per hour—but the water seems to be deep enough for any boat that is likely to navigate it.

Six miles below this, as already noticed, Rink Rapids are situated. They are of no great importance, the westerly half of the stream only being obstructed. The easterly is not in any way affected, the current being smooth and the water deep.

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Between Five Finger Rapids and Pelly River, fifty-eight and a half miles, no streams of any importance enter the Lewes; in fact, with the exception of the Tatshun, it may be said that none at all enter.

About a mile below Rink Rapids the river spreads out into a lake-like expanse, with many islands; this continues for about three miles, when it contracts to something like the usual width; but bars and small islands are very numerous all the way to Pelly River. About five miles above Pelly River there is another lake-like expanse filled with islands. The river here for three or four miles is nearly a mile wide, and so numerous and close are the islands that it is impossible to tell when floating among them where the shores of the river are. The current, too, is swift, leading one to suppose the water shallow; but I think even here a channel deep enough for such boats as will navigate this part of the river can be found. Schwatka named this group of islands "Ingersoll Islands."

At the mouth of the Pelly the Lewes is about half a mile wide, and here too there are many islands, but not in groups as at Ingersoll Islands.

About a mile below the Pelly, just at the ruins of Fort Selkirk, the Yukon was found to be 565 yards wide; about two-thirds being ten feet deep, with a current of about four and three-quarters miles per hour; the remaining third was more than half taken up by a bar, and the current between it and the south shore was very slack.

Pelly River at its mouth is about two hundred yards wide, and continues this width as far up as could be

seen. Dr. Dawson made a survey and examination of this river, which will be found in his report already cited, "Yukon District and Northern British Columbia."

Just here for a short distance the course of the Yukon is nearly west, and on the south side, about a mile below the mouth of the Lewes, stands all that remains of the only trading post ever built by white men in the district. This post was established by Robert Campbell, for the Hudson's Bay Company, in the summer of 1848. It was first built on the point of land between the two rivers, but this location proving untenable on account of flooding by ice jams in the spring, it was, in the season of 1852, moved across the river to where the ruins now stand. It appears that the houses composing the post were not finished when the Indians from the coast on Chilkat and Chilkoot Inlets came down the river to put a stop to the competitive trade which Mr. Campbell had inaugurated, and which they found to seriously interfere with their profits. Their method of trade appears to have been then pretty much as it is now—very one-sided. What they found it convenient to take by force they took, and what it was convenient to pay for at their own price they paid for.

Rumors had reached the post that the coast Indians contemplated such a raid, and in consequence the native Indians in the vicinity remained about nearly all summer. Unfortunately, they went away for a short time, and during their absence the coast Indians arrived in the early morning, and surprised Mr. Campbell in bed. They were not at all rough with him, but gave him the privilege of leaving the place within twenty-four hours, after which he was informed that he was liable to be shot if seen by them in the locality. They then pillaged the place and set fire to it, leaving nothing but the remains of the two chimneys which are still standing. This raid and capture took place on the 1st of August, 1852.

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Nothing more was ever done in the vicinity of Fort Selkirk by the Hudson's Bay Company after these events, and in 1869 the Company was ordered by Capt. Charles W. Raymond, who represented the United

States Government, to evacuate the post at Fort Yukon, he having found that it was west of the 141st meridian. The post was occupied by the Company, however, for some time after the receipt of this order, and until Rampart House was built, which was intended to be on British territory, and to take the trade previously done at Fort Yukon.[1]

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Below Fort Selkirk, the Yukon River is from five to six hundred yards broad, and maintains this width down to White River, a distance of ninety-six miles. Islands are numerous, so much so that there are very few parts of the river where there are not one or more in sight. Many of them are of considerable size, and nearly all of them are well timbered. Bars are also numerous, but almost all are composed of gravel, so that navigators will not have to complain of shifting sand bars. The current as a general thing, is not so rapid as in the upper part of the river, averaging about four miles per hour. The depth in the main channel was always found to be more than six feet.

From Pelly River to within twelve miles of White River the general course of the river is a little north of west; it then turns to the north, and the general course as far as the site of Fort Reliance is due north.

White River enters the main river from the west. At the mouth it is about two hundred yards wide, but a great part of it is filled with ever-shifting sand-bars, the main volume of water being confined to a channel not more than one hundred yards in width. The current is very strong, certainly not less than eight miles per hour. The color of the water bears witness to this, as it is much the muddiest that I have ever seen.

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Between White and Stewart Rivers, ten miles, the river spreads out to a mile and upwards in width, and is a maze of islands and bars. The survey was carried down the easterly shore, and many of the channels passed through barely afforded water enough to float the canoes. The main channel is along the westerly shore, down which the large boat went, and the crew reported plenty of water.

1 Fort Selkirk is now occupied by the North American Transportation and Trading Company as a winter station.

Stewart River enters from the east in the middle of a wide valley, with low hills on both sides, rising on the north side in steps or terraces to distant hills of considerable height. The river half a mile or so above the mouth, is two hundred yards in width. The current is slack and the water shallow and clear, but dark colored.

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From Stewart River to the site of Fort Reliance, seventy-three and a quarter miles, the Yukon is broad and full of islands. The average width is between a half and three-quarters of a mile, but there are many expansions where it is over a mile in breadth; however, in these places it cannot be said that the waterway is wider than at other parts of the river, the islands being so large and numerous. In this reach *no streams of any importance enter.*

About thirteen miles below Stewart River a large valley joins that of the river, but the stream occupying it is only a large creek.

Twenty-two and a half miles from Stewart River another and larger creek enters from the same side; it agrees with the description of Sixty Mile Creek,[1] and I have so marked it on my map. This stream is of no importance except for what mineral wealth may be found in it.

Six and a half miles above Fort Reliance the Thron-Diuck River of the Indians (Deer River of Schwatka) [now known as the Klondike] enters from the east. It is a small river about forty yards wide at the mouth, and shallow; the water is clear and transparent and of beautiful blue color. The Indians catch great numbers of salmon here. They had been fishing shortly before my arrival, and the river, for some distance up, was full of salmon traps.

A miner had prospected up this river for an esti-

1 Sixty Mile Creek is about one hundred miles long very crooked, with a swift current and many rapids, and is therefore not easy to ascend. Miller, Glacier, Gold, Little Gold, and Bedrock creeks are all tributaries of Sixty Mile. Some of the richest discoveries in gold so far made in the interior since 1894 have been upon these creeks, and especially has this been the case upon the two first mentioned. There is a claim upon Miller Creek, owned by Joseph Boudreau, from which over $100,000 worth of gold is said to have been taken out. Indian Creek enters the Yukon from the east about thirty miles below Sixty Mile.

mated distance of forty miles, in the season of 1887. I did not see him, but got some of his information at second hand. The water being so beautifully clear I thought it must come through a large lake not far up; but as far as he had gone no lakes were seen. He said the current was comparatively slack, with an occasional "ripple" or small rapid. Where he turned back the river is surrounded by high mountains, which were then covered with snow, which accounts for the purity and clearness of the water.

It appears that the Indians go up this stream a long distance to hunt, but I could learn nothing definite as to their statements concerning it.

Twelve and a half miles below Fort Reliance, the Chandindu River, as named by Schwatka, enters from the east. It is thirty to forty yards wide at the mouth, very shallow, and for half a mile up is one continuous rapid. Its valley is wide and can be seen for a long distance looking northeastward from the mouth.

Between Fort Reliance and Forty Mile River (called Cone Hill River by Schwatka) the Yukon assumes its normal appearance, having fewer islands and being narrower, averaging four to six hundred yards wide, and the current being more regular. This stretch is forty-six miles long, but was estimated by the traders at forty, from which the Forty Mile River took its name.[1]

Forty Mile River joins the main river from the west. Its general course as far up as the International Boundary, a distance of twenty-three miles, is southwest; after this it is reported by the miners to run nearer south. Many of them claim to have ascended this stream for more than one hundred miles, and

1 Forty Mile River is not generally clear of ice till May, and heavy frosts occur in September. Forty Mile townsite is situated on the south side of the Forty Mile River at its junction with the Yukon. The Alaska Commercial Company has a station here which was for some years in charge of L. N. McQuestion; there are also several blacksmith shops, restaurants, billiard halls, bakeries, an opera house and so on. Rather more than half a mile below Forty Mile townsite the town of Cudahy was founded on the north side of Forty Mile River in the summer of 1892. It is named after a well-known member of the North American Transportation and Trading Company. In population and extent of business the town bears comparison with its neighbor across the river. The North American Transportation and Trading Company has erected a saw mill and some large warehouses here.

speak of it there as quite a large river. They say that at that distance it has reached the level of the plateau, and the country adjoining it they describe as flat and swampy, rising very little above the river. It is only a short distance across to the Tanana River—a large tributary of the Yukon—which is here described as an important stream. However, only about twenty-three miles of Forty Mile River are in Canada; the upper part of it and its relation to other rivers in the district having no direct interest for us.

Forty Mile River is one hundred to one hundred and fifty yards wide at the mouth, and the current is generally strong, with many small rapids. Eight miles up is the so-called canon; it is hardly entitled to that distinctive name, being simply a crooked contraction of the river, with steep rocky banks, and on the north side there is plenty of room to walk along the beach. At the lower end of the canon there is a short turn and swift water in which are some large rocks; these cannot generally be seen, and there is much danger of striking them running down in a boat. At this point several miners have been drowned by their boats being upset in collision with these rocks. It is no great distance to either shore, and one would think an ordinary swimmer would have no difficulty in reaching land; but the coldness of the water soon benumbs a man completely and renders him powerless.

The length of the so-called canon is about a mile. Above it the river up to the boundary is generally smooth, with swift current and an occasional ripple. The amount of water discharged by this stream is considerable; but there is no prospect of navigation, it being so swift and broken by small rapids.

From Forty Mile River to the boundary the Yukon preserves the same general character as between Fort Reliance and Forty Mile, the greatest width being about half a mile and the least about a quarter.

Fifteen miles below Forty Mile River a large mass of rock stands on the east bank. This was named by Schwatka "Roquette Rock," but is known to the traders as Old Woman Rock; a similar mass, on the west side of the river, being known as Old Man Rock.

Between Forty Mile River and the boundary line no stream of any size joins the Yukon; in fact, there is only one stream, which some of the miners have

named Sheep Creek, but as there is another stream further down the river, called by the same name, I have named it Coal Creek. It is five miles below Forty Mile and comes in from the east, and is a large creek, but not at all navigable. On it some extensive coal seams were seen, which will be more fully referred to further on.

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At the boundary the river is somewhat contracted, and measures only 1,280 feet across in the winter; but in summer, at ordinary water level, it would be about one hundred feet wider. Immediately below the boundary it expands to its usual width, which is about 2,000 feet.

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The current, from the boundary down to the confluence with the Porcupine is said to be strong, and much the same as that above; from the Porcupine down for a distance of five or six hundred miles it is called medium, and the remainder easy.

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From Stewart River to the mouth of the Yukon is about 1,650 miles, and the only difficult place in all this distance is the part near the confluence with the Porcupine, which has evidently been a lake in past ages, but is now filled with islands; it is said that the current here is swift, and the channels generally narrow, rendering navigation difficult.

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In making preparations for the foundations of our house at our winter quarters near the boundary we had to excavate in the bank of the river, and in an exposed place where the sun's rays could reach the surface without hindrance from trees or other shade we found the depth to the perpetually frozen ground to be not more than two feet. In the woods where the ground was covered with over a foot of moss the frozen ground is immediately below the moss. On this the timber is generally small, and of very slow growth, as is evident from the number of annual rings of growth. I have seen trees of only three or four inches in diameter which were upwards of one hundred and fifty years old.

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Forty Mile River is the only river in the district on

which, up to the fall of 1888, coarse gold had been found, and it may be said that much of it can hardly claim that distinctive title. The largest nugget found was worth about $39. It was lost on the body of a miner who was drowned at the canon. Several other nuggets of much less value have been found, but the number of pieces which one could call "nugget" are few.

The miners term Forty Mile a "bed rock" creek—that is, one in the bed of which there is little or no drift, or detrital matter, the bottom of the river being bed-rock. In many places this rock has been scraped with knives by the miners, in order to gather the small amount of detritus and its accompanying gold.

Very little of the gold on this creek was found in Canadian territory, the coarsest gold being found well up the river. The river had been prospected in 1887 for upwards of one hundred miles, and gold found all the way up. The great point with a miner is to find where the gold comes from. To do this he has to reach a point on the river where there is none; then he knows he has passed the source, and will search in side valleys and gulches. The theory seems to be that the gold is stored up somewhere and dribbled out along the river.

Pieces of gold-bearing quartz had frequently been picked up along the river in the shallow drift, but none had been found in place, nor did it appear to me that much search had been made for it. Near the mouth of the river there is an extensive flat of detrital matter through which a couple of small creeks flow. This is all said to be gold-bearing, and, it was thought, would pay well for sluicing. Accordingly, a couple of claimants had staked off claims at the mouth of the creeks, and intended to try sluicing in the season of 1888. I have not heard how the venture succeeded.

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Big and Little Salmon rivers have also been prospected, with the usual result that more or less gold has been found everywhere.

I think it may, with confidence, be asserted that rich finds will yet be made of both coarse gold and gold-bearing quartz. It is not likely in the nature of things that such a vast extent of country should have

all its fine gold deposited as sediment, brought from a distance in past ages of the world's development. If this is not the case, the matrix, from which all the gold on these streams has come, must still exist, in part at least, and will no doubt be discovered, and thus enrich this otherwise gloomy and desolate region.

There are many bank and bench bars along the river which would pay well if sluiced, but there is no convenient or economical way of getting water on them, and there is no pumping machinery as yet in the country. One bank bar of large extent, called Rogers' Bar, just below Old Man Rock, attracted attention in the spring of 1888, and some miners were thinking of getting in an engine and pumps to work it. I made an estimate of the size of engine required for their needs, and computed the probable cost of the plant laid down, but it does not appear that they made any further move.

This bar is more than fifty feet above the water. It fronts on the river for more than two miles, and is in places nearly two miles deep. It is believed that in past ages the Old Man and Old Woman rocks were connected and formed a barrier across the river, over which there was a cataract. Below this the fine gold remained, while the sand and gravel were in part carried further down. So impressed were some persons with the prospect of rich finds on this bar that they thought of bringing water across from the high level of Forty Mile River, a distance of over thirty miles; but when I went up Forty Mile River, to the boundary I saw that it could not be done without the aid of force pumps, and I explained this drawback to them. This bar is said to yield four to six cents to the pan, which, with plenty of water for sluicing, would pay well, while its large extent would warrant considerable outlay. Doubtless there are many other bars as rich as this one, though not as large.

Platinum is generally found associated with gold. This is particularly the case on Forty Mile River.

As very few outside of mining communities understand anything of the nomenclature of the craft, or of the methods employed to separate the very small quantities of the precious metal from the baser material with which it is associated, a short description will not be out of place.

When a miner "strikes" a bar he "prospects" it by washing a few panfuls of the gravel or sand of which it is composed. According to the number of "colors" he finds to the pan, that is, the number of specks of gold he can see in his pan after all the dirt has been washed out, he judges of its richness. Many of them have had so much experience that they can tell in a few minutes, very nearly, how much a bar will yield per day to the man.

The process of "placer" mining is about as follows: After clearing all the coarse gravel and stone off a patch of ground, the miner lifts a little of the finer gravel or sand in his pan, which is a broad, shallow dish, made of strong sheet iron; he then puts in water enough to fill the pan, and gives it a few rapid whirls and shakes; this tends to bring the gold to the bottom on account of its greater specific gravity. The dish is then shaken and held in such a way that the gravel and sand are gradually washed out, care being taken as the process nears completion to avoid letting out the finer and heavier parts that have settled to the bottom. Finally all that is left in the pan is whatever gold may have been in the dish and some black sand which almost invariably accompanies it.

This black sand is nothing but pulverized magnetic iron ore. Should the gold thus found be fine, the contents of the pan are thrown into a barrel containing water and a pound or two of mercury. As soon as the gold comes in contact with mercury it combines with it and forms an amalgam. The process is continued until enough amalgam has been formed to pay for "roasting" or "firing." It is then squeezed through a buckskin bag, all the mercury that comes through the bag being put back into the barrel to serve again, and what remains in the bag is placed in a retort, if the miner has one, or, if not, on a shovel, and heated until nearly all the mercury is vaporized. The gold then remains in a lump with some mercury still held in combination with it.

This is called the "pan" or "hand" method, and is never, on account of its slowness and laboriousness, continued for any length of time when it is possible to procure a "rocker" or to make and work sluices.

A "rocker" is simply a box about three feet long and two wide, made in two parts, the top part being shal-

low, with a heavy sheet iron bottom, which is punched full of quarter-inch holes. The other part of the box is fitted with an inclined shelf about midway in its depth, which is six or eight inches lower at its lower end than at its upper. Over this is placed a piece of heavy woolen blanket. The whole is then mounted on two rockers, much resembling those of an ordinary cradle, and when in use they are placed on two blocks of wood so that the whole may be readily rocked. After the miner has selected his claim, he looks for the most convenient place to set up his "rocker," which must be near a good supply of water. Then he proceeds to clear away all the stones and coarse gravel, gathering the finer gravel and sand in a heap near the "rocker." The shallow box on top is filled with this, and with one hand the miner rocks it, while with the other he ladles in water. The finer matter with the gold falls through the holes onto the blanket, which checks its progress, and holds the fine particles of gold, while the sand and other matters pass over it to the bottom of the box, which is sloped so that what comes through is washed downwards and finally out of the box. Across the bottom of the box are fixed thin slats, behind which some mercury is placed to catch any particles of gold which may escape the blanket. If the gold is nuggety, the large nuggets are found in the upper box, (their weight detaining them until all the lighter stuff has passed through) and the smaller ones are held by a deeper slat at the outward end of the bottom of the box. The piece of blanket is, at intervals, taken out and rinsed into a barrel; if the gold is fine, mercury is placed at the bottom of the barrel, as already mentioned.

Sluicing is always employed when possible. It requires a good supply of water with sufficient head or fall. The process is as follows: Planks are procured and formed into a box of suitable width and depth. Slats are fixed across the bottom of the box at suitable intervals, or shallow holes bored in the bottom in such order that no particle could run along the bottom in a straight line without running over a hole. Several of these boxes are then set up with a considerable slope and are fitted into one another at the ends like a stovepipe. A stream of water is now directed into the upper end of the highest box. The gravel having been

collected, as in the case of the rocker, it is shoveled into the upper box and is washed downwards by the strong current of water. The gold is detained by its weight, and is held by the slats or in the holes mentioned; if it is fine, mercury is placed behind the slats or in these holes to catch it. In this way about three times as much dirt can be washed as by the rocker, and consequently three times as much gold is secured in a given time. After the boxes are done with they are burned, and the ashes washed for the gold held in the wood.

Unfortunately, on the Lewes and Pelly rivers there is no way of sluicing without the aid of pumps, there being no streams with fall enough to get the necessary current in the sluice boxes.

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A great many of the miners spend their time in the summer prospecting, and in the winter resort to a method lately adopted and which is called "burning." They make fires on the surface, thus thawing the ground until the bed-rock is reached, then drift and tunnel; the pay dirt is brought to the surface and heaped in a pile until spring when water can be obtained. The sluice boxes are then set up and the dirt is washed out, thus enabling the miner to work advantageously and profitably the year round. This method has been found very satisfactory in places where the pay streak is at any great depth from the surface. In this way the complaint is overcome which has been so commonly advanced by miners and others that in the Yukon several months of the year are lost in idleness. Winter usually sets in very soon after the middle of September and continues until the beginning of June, and is decidedly cold. The mercury frequently falls to 60° below zero, but in the interior there is so little humidity in the atmosphere that the cold is more easily endured than on the coast. In the absence of thermometers, miners, it is said, leave their mercury out all night; when they find it frozen solid in the morning they conclude that it is too cold to work, and stay at home. The temperature runs to great extremes in the summer as well as in the winter; it is quite a common thing for the thermometer to register 100 degrees in the shade. There is continuous day-

light from the middle of June until the early part of August, but in the depth of winter there is little more than three hours of partial daylight in the twenty-four. So that constant daylight for a portion of the year and almost total darkness for another portion might very well create doubts in one's mind as to what portion of the day in either case should be given to sleep. In the summer months it is possible for a miner to put in as many hours as he has the power to endure the physical strain. Constant daylight admits of several shifts of men being employed, and in this way mining operations may go on continuously throughout every hour of the day.

I have already sent out a short report from this place [Cudahy], being fortunate enough to catch the boat here when I came down. In that report I made some remarks on the town sites in our territory; since then I have learned nothing of importance in that connection, the most noteworthy fact being that gold-bearing quartz has been found in Cone hill, which stands midway in the valley of the Forty Mile River, a couple of miles above the junction with the Yukon. The quantity in sight rivals that of the Treadwell mine on the coast, and the quality is better, so much so that it is thought it will pay well to work it even under the conditions existing here. Application has been made to purchase it, and an expert is now engaged in putting in a tunnel to test the extent. Indications in sight point to the conclusion that the whole hill is composed of this metalliferous rock. If the tests corroborate this, a stamp mill will be erected next season, which will have an important bearing on the future of this country. If this venture succeeds, (as it doubtless will, for it is in the hands of parties who are able to push it) it will give permanent employment to a good many men, who with their families will form quite a community.

Apart from this I cannot see very much of a chance for speculation in buying or selling town sites; and my opinion is confirmed by the present condition of Forty Mile, which now contains very few people, the great majority of the miners remaining on their claims all winter, coming in only once or twice for supplies. Even in the case of the mine at Cone hill being worked, only a village would be formed around it.

Outside of all such considerations, the present applicants for Forty Mile and Cudahy town sites have either directly or indirectly occupied the present sites for years and spent thousands of dollars improving and building on them. One house erected in Forty Mile last summer is said to have cost $10,000. It would cost between two and three thousand in Ottawa. These improvements cover so much ground that even if it were decided to lay out the town site and convey it in lots the applicants would have a claim to most of the ground they ask for.

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A couple of coal claims have been staked and applied for, which I will survey in the spring, and at the same time make an examination of the coal area where they are. I may anticipate this to a certain extent by saying that, a few days after I reported to you last fall, I went up Coal Creek to search for this coal, to which I referred in my report of 1887 and 1888. I found it about 7 miles up the creek overlying a coarse sandstone and under drift clay and gravel.

The seam is 12 feet 6 inches thick. It seems to me to be a good quality of lignite. I have packed 30 or 40 pounds of the best specimens I found a few feet in, and will send them out to you in the spring, that a test may be made. That exposure has now been staked and applied for to the agent here. I judge from the position of these coal claims that we have quite an area of coal here. Both exposures furnish, as far as external features show, the same character of coal, and are about the same level, so that it is fair to assume they are in the same seam. I will make a search in the intervening distance to determine this when I make a survey of the claims. Coal is reported in the drift on the Chandindu, about 30 miles up the river from here, which would go to show that there is another area or a continuation of this one there.

On my way down the river I saw the copper-bearing vein near Thron-Diuck Creek above Fort Reliance. It does not appear to be extensive, but there are several small veins in the vicinity, and it may be that a commercially valuable deposit may be found; about 25 miles further down I found a small vein which indicates that this copper deposit is extensive.

I found a small seam of rather poor asbestos a short distance from Cudahy, and as there is quite an extensive area of serpentine around here, asbestos may yet be found of commercial value.

Very rich placer diggings are now being worked on the creeks flowing into Sixty Mile, part of which are supposed to be in Canada. I shall be able to say definitely when I produce the line that far where they are and how much we have of them.

Except in the vicinity of Forty Mile there appears to be nothing doing in the way of quartz prospecting.

Last season good placer mines were found on the Hootalinqua—Teslin of Dawson—with coarse gold in them, and there will probably be a lot of claims worked there next season. Several miners were wintering there to commence operations early in the spring. A great deal of improvement has been introduced in the working of placer diggings, which has much increased the output. The miner instead of putting in the winter months in the towns and saloons remains on his claim all winter, cutting wood in the earlier months, with which he builds fires and thaws the frozen gravel, piling it up to be washed as soon as the flow of water in the spring will permit. In this way the work is more than doubled, but as the supply of wood is very limited except on the main river this cannot always be done.

TIMBER.

I made a complete survey of Forty Mile, locating and taking the dimensions of every house in it, and it is the worst jumble I ever saw. I had to do this though it entailed a great deal of work, for there were so many claim holders, and there appeared to be a general distrust in the vicinity; every man wants himself on record in evidence as to his claim. I have taken some, but I have several days' work yet. I made a survey of the island for the Anglican mission, and of another island for a man named Gibson. This is in the delta of Forty Mile Creek, and he intends to make a market garden for the growth of such vegetables as the country will produce. In my final report I will deal as fully as my experience here will permit on that phase of the country's character. Many here have

small gardens and are fairly successful with ordinary vegetables. I have advised many to correspond with the experimental farm at Ottawa, with a view to learning the best sort of vegetables for growth in this climate.

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Assays of the Cone hill quartz are very satisfactory, and the quantity good for generations of work; were it on the coast the Treadwell mine would be diminutive beside it. Five tons of rock are being sent out from it for a mill test, and should they prove as satisfactory as the test of a ton sent out last year, I understand the parties owning it will proceed to develop it. If it starts and proves reasonably successful there are scores of other places in the country that may yield as well. An expert here who prospects for the N. A. T. and T. Co., found a ledge last spring on the Chandindu River of Schwatka (known as Twelve Mile Creek here) and located two full claims on it. He told me the assay he made of my specimens of it was much more satisfactory than that of Cone Hill, and this ledge, he claims, is where a commencement should be made in quartz milling in this country, and there would be no fear of the result. He appears to be pretty well versed in mining lore, is a practical assayer—that is his profession—and he says he never saw or read of anything like it for extent in the world. He informed me there were extensive deposits of coal about 20 miles up the creek and this ledge was about 4 miles up. He has no doubt but that the copper around Fort Reliance will, with better facilities, yet be a valuable feature of the country. He showed me a lump of native copper some Indians said they found on the head of White River, but could not or would not specify where. Speaking of White River reminds me that it and Sixty Mile are very close together in the vicinity of the boundary. I was told it was only a short walk from the creeks of one to the creeks of the other, but how far from stream to stream is uncertain.

This expert is an American who has spent many years of his life in the best mining districts in the United States, and he assures me this country promises better than any he ever saw before, and as an evi-

dence of his satisfaction with it he is going to spend the rest of his life here.

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My last report told you of the agent here [Cudahy] going to Miller and Glacier Creeks and collecting fees and making entries; as he did not go west of those creeks no complications will arise, for as you will see by my sketch map they are within Canada. I may say here that one claim on Miller Creek turned out about $70,000 last winter, and several others have done very well too. So far nearly all the miners have passed here, going to Circle City (about 200 miles down) and I have no doubt that many of them will keep on going.

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Cudahy, Sept. 6, 1896.

I am very much pleased to be able to inform you that a most important discovery of gold has been made on a creek called Bonanza Creek, an affluent of the river known here as the Klondike (the correct name is Thron-Diuck). It is marked on the maps extant as Deer River and joins the Yukon a few miles above the site of Fort Reliance.

The discovery was made by G. W. Cormack, who worked with me in 1887 on the coast range. The indications are that it is very rich, indeed the richest yet found, and as far as work has been carried on it realizes expectations. It is only two weeks since it was known, and already about 200 claims have been staked on it, and the creek is not yet exhausted; it and its branches are considered good for 300 or 400 claims.

Besides there are two other creeks above it which it is confidently expected will yield good pay, and if they do so we have from 800 to 1,000 claims on this river which will require over 2,000 men for their proper working. Between Thron-Diuck River and Stewart River a large creek called Indian Creek flows into the Yukon, and rich prospects have been found on it, and no doubt it is in the gold-bearing country between Thron-Diuck and Stewart Rivers, which is considered by all the old miners the best and most extensive gold country yet found. Scores of them would prospect it but for the fact that they cannot get provisions up there, and it is too far to boat them up from here in small boats.

News has just arrived from Bonanza Creek that three men worked out $75 in four hours the other day, and a $12 nugget has been found, which assures the character of the ground, namely, coarse gold and plenty of it, as three times this can be done with sluice boxes. You can fancy the excitement here. It is claimed that from $100 to $500 per day can be made off the ground that has been prospected so far. As we have about 100 claims on Glacier and Miller Creeks, with three or four hundred in this vicinity, next year it is imperative that a man be sent in here to look after these claims and all land matters, and it is almost imperative that the agent be a surveyor. Already on Bonanza Creek they are disputing about the size of claims.

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I cannot here enter into the reasons for it, but I unhesitatingly make the assertion that this corner of our territory from the coast strip down and from the 141st meridian eastward will be found to be a fairly rich and very extensive mining region.

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Cudahy, Nov. 6, 1896.

The journey has been made, and I would not hesitate to undertake it were things more reasonable here and dog food plentiful, but it would take at least $1,000 to equip me with transport and outfit, which sum, I think, I can expend more in the interests of the country by remaining here and making a survey of the Klondak of the miners—a mispronunciation of the Indian word or words "Thron-dak" or "diuck," which means plenty of fish, from the fact that it is a famous salmon stream. It is marked Tondak on our maps. It joins the Yukon from the east, a few miles above the site of Fort Reliance, about 50 miles above here.

As I have already intimated, rich placer mines of gold were discovered on the branches of this stream. The discovery, I believe, was due to the reports of Indians. A white man named George W. Cormack, who worked with me in 1887, was the first to take advantage of the rumors and locate a claim on the first branch, which was named by the miners Bonanza Creek. Cormack located late in August, but had to cut some logs for the mill here to get a few

pounds of provisions to enable him to begin work on his claim. The fishing at Thron-Diuck having totally failed him, he returned with a few weeks' provisions for himself, his wife and brother-in-law (Indians) and another Indian in the last days of August, and immediately set about working his claim. As he was very short of appliances he could only put together a rather defective apparatus to wash the gravel with. The gravel itself he had to carry in a box on his back from 30 to 100 feet; notwithstanding this, the three men, working very irregularly, washed out $1,200 in eight days, and Cormack asserts with reason that had he had proper facilities it could have been done in two days, besides having several hundred dollars more gold which was lost in the tailings through defective apparatus.

On the same creek two men rocked out $75 in about four hours, and it is asserted that two men in the same creek took out $4,000 in two days with only two lengths of sluice boxes. This last is doubted, but Mr. Leduc assures me he weighed that much gold for them, but is not positive where they got it. They were new comers and had not done much in the country, so the probabilities are they got it on Bonanza Creek.

A branch of Bonanza named Eldorado has prospected magnificently, and another branch named Tilly Creek has prospected well; in all there are some four or five branches to Bonanza which have given good prospects.

There are about 170 claims staked on the main creek, and the branches are good for about as many more, aggregating say 350 claims, which will require over 1,000 men to work properly.

A few miles further up Bear Creek enters Thron-Diuck, and it has been prospected and located on. Compared with Bonanza it is small, and will not afford more than 20 or 30 claims, it is said. About 12 miles above the mouth Gold-bottom Creek joins Thron-Diuck, and on it and a branch named Hunker Creek (after the discoverer) very rich ground has been found. One man showed me $22.75 he took out in a few hours on Hunker Creek with a gold pan, prospecting his claim on the surface, taking a handful here and there as fancy suggested. On Gold-bottom Creek and branches there will probably be 200 or 300 claims. The

Indians have reported another creek much farther up, which they call "Too much gold creek," on which the gold is so plentiful that, as the miners say in joke, "you have to mix gravel with it to sluice it." Up to date nothing definite has been heard from this creek.

From all this we may, I think, infer that we have here a district which will give 1,000 claims of 500 feet in length each. Now, 1,000 such claims will require at least 3,000 men to work them properly, and as wages for working in the mines are from $8 to $10 per day without board, we have every reason to assume that this part of our territory will in a year or two contain 10,000 souls at least. For the news has gone out to the coast and an unprecedented influx is expected next spring. And this is not all, for a large creek called Indian Creek joins the Yukon about midway between Thron-Diuck and Stewart Rivers, and all along this creek good pay has been found. All that has stood in the way of working it heretofore has been the scarcity of provisions and the difficulty of getting them up there even when here. Indian Creek is quite a large stream and it is probable it will yield five or six hundred claims. Further south yet lies the head of several branches of Stewart River on which some prospecting has been done this summer and good indications found, but the want of provisions prevented development. Now gold has been found in several of the streams joining Pelly River, and also all along the Hootalinqua. In the line of these finds farther south is the Cassiar gold field in British Columbia; so the presumption is that we have in our territory along the easterly water-shed of the Yukon a gold-bearing belt of indefinite width, and upwards of three hundred miles long, exclusive of the British Columbia part of it. On the westerly side of the Yukon prospecting has been done on a creek a short distance above Selkirk with a fair amount of success, and on a large creek some 30 or 40 miles below Selkirk fair prospects have been found; but as before remarked, the difficulty of getting supplies here prevents any extended prospecting.

Dalton informed me he had found good prospects on a small creek nearly midway between the coast range and Selkirk in his route. His man showed

me some coarse gold, about a dollar's worth, he found on the head of a branch of the Altsek River near the head of Chilkat Inlet, which is inside the summit of the coast range and of course in our territory. From this you will gather that we have a very large area all more or less gold bearing and which will all yet be worked.

Good quartz has been found in places just across the line on Davis Creek, but of what extent is unknown, as it is in the bed of the creek and covered with gravel. Good quartz is also reported on the hills around Bonanza Creek, but of this I will be able to speak more fully after my proposed survey. It is pretty certain from information I have got from prospectors that all or nearly all of the northerly branch of White River is on our side of the line, and copper is found on it, but more abundantly on the southerly branch of which a great portion is in our territory also, so it is probable we have that metal, too. I have seen here several lumps of copper brought by the natives from White River, but just from what part is uncertain. I have also seen a specimen of silver ore said to have been picked up in a creek flowing into Lake Bennet, about 14 miles down it, on the east side.

* * * * *

Before closing I may say that every report that comes in from Bonanza Creek is more encouraging than the last. Prospecting has only begun, and up to date of mailing, November 22nd, 1896, very rich prospects have been found on the few claims prospected on; from one dollar to the pan of dirt up to twelve dollars are reported, and no bed rock found yet. This means from $1,000 to $12,000 per day per man sluicing.

* * * * * *

Cudahy, Dec. 9, 1896.

Since my last the prospects on Bonanza Creek and tributaries are increasing in richness and extent until now it is certain that millions will be taken out of the district in the next few years.

On some of the claims prospected the pay dirt is of great extent and very rich. One man told me yesterday that he washed out a single pan of dirt on one of

the claims on Bonanza and found $14.25 in it. Of course that may be an exceptionally rich pan, but $5 to $7 per pan is the average on that claim it is reported, with 5 feet of pay dirt and the width yet undetermined, but it is known to be 30 feet even at that; figure the result at 9 to 10 pans to the cubic foot, and 500 feet long; nearly $4,000,000 at $5 per pan—one-fourth of this would be enormous.

Another claim has been prospected to such an extent that it is known that there is about 5 feet pay dirt averaging $2 per pan and width not less than 30 feet. Enough prospecting has been done to show that there are at least 15 miles of this extraordinary richness; and the indications are that we will have 3 or 4 times that extent, if not all equal to the above at least very rich.

* * * * * *

Cudahy, Jan. 11, 1897.

The reports from the Thron-Diuck region are still very encouraging; so much so that all the other creeks around are practically abandoned, especially those on the head of Forty Mile in American territory, and nearly one hundred men have made their way up from Circle City, many of them hauling their sleds themselves. Those who cannot get claims are buying in on those already located. Men cannot be got to work for love or money, and development is consequently slow; one and a half dollars per hour is the wages paid the few men who have to work for hire, and work as many hours as they like. Some of the claims are so rich that every night a few pans of dirt suffices to pay the hired help when there is any; as high as $204 has been reported to a single pan, but this is not generally credited. Claim owners are now very reticent about what they get, so you can hardly credit anything you hear; but one thing is certain, we have one of the richest mining areas ever found, with a fair prospect that we have not yet discovered its limits.

Miller and Glacier Creeks on the head of Sixty Mile River, which my survey of the 141st meridian determined to be in Canada, were thought to be very rich, but they are poor both in quality and quantity compared with Thron-Diuck.

Cudahy, Jan. 23, 1897.

Placer prospects continue more and more encouraging and extraordinary. It is beyond doubt that three pans on different claims on Eldorado turned out $204, $212 and $216; but it must be borne in mind that there were only three such pans, though there are many running from $10 to $50.

DISTANCES FROM JUNEAU.

	Miles.
Haines Mission (Chilkat)	80
Dyea	100
Head of Canoe Navigation	106
Summit of Chilkoot Pass	115
Head Lake Lindeman	124
Head of Lake Bennett	129
Foot of Lake Bennett	155
Foot of Caribou Crossing	158
Foot of Takou (Tagish) Lake	175
Takish House	179
Head of Mud Lake	180
Foot of Lake Marsh	200
Head of Canyon	225
Foot of Canyon	226
Head of White Horse Rapids	228
Takaheena River	240
Head of Lake Labarge	256
Foot of Lake Labarge	289
Hootalinqua River	320
Cassiar Bar	347
Big Salmon River	352
Little Salmon River	390
Five Fingers Rapids	451
Rink Rapids	457
Pelly River	510
White River	606
Stewart River	630
Sixty Mile Post	651
Klondike	700
Fort Reliance	704
Forty Mile Post	750
Fort Cudahy	750
Circle City	920
Forty Mile Post to Diggings	70
Circle City to Diggings	50

Mouth of Cook Inlet	700
Turnagain Arm	800
Six Mile Creek	825
Funter Bay	47
Berner Bay	50
Sitka	140
Snettisham	32
Sum Dum	50
Wrangell	160

While no actual survey has been made of the route from Juneau, the distances given have been carefully estimated, and will be found approximately correct.

The following table is also given for the convenience of those traveling over the Chilkoot Pass:

	Miles.
Dyea	0
To Chilkoot Summit	15
" Head Lake Lindeman	9
" Foot Lake Lindeman	5
" Portage to Lake Bennett	0¾
" Foot Lake Bennett	26
" Caribou Crossing	2½
" Foot Tagish Lake	16
" Head Lake Marsh	5
" Foot Lake Marsh	19
" Lewes River Canon	28
" From Canon to White Horse Rapids	1½
" To Head Lake Labarge	27
" Foot Lake Labarge	31
" Teslintoo River	31 7-10
" Big Salmon River	33½
" Little Salmon River	36¼
" Eagle's Nest	8
" Nordenskiold River	32
" Five Finger Rapids	19
" Rink Rapids	6
" Pelly River	52½
" Fort Selkirk	1½
" White River	95
" Stewart River	10
" Sixty Mile River	22½
" Dawson City	44½
" Fort Reliance	6½
" Forty Mile River	46
" Circle City	182

EXTRACT FROM THE REPORT OF THE GOVERNOR OF ALASKA FOR THE YEAR 1897.

Outfit for two men for fourteen months, food and clothing, Sitka (Alaska) prices, August 1, 1897:

4 barrels best flour, at $6	$ 24.00
200 pounds granulated sugar, at 6 cents	12.00
200 pounds navy beans, at 4 cents	8.00
100 pounds of corn meal	2.75
250 pounds of breakfast bacon, at 12½ cents	31.25
75 pounds of island rice, 6 cents	4.50
2 cases condensed milk	17.50
20 pounds salt	.35
25 pounds best Mocha and Java coffee	8.75
10 pounds best tea	4.50
8 pounds soda	.70
20 pounds baking powder	9.20
25 pounds dried apricots	2.50
25 pounds dried peaches	2.50
25 pounds dried apples	2.25
2 boxes candles	5.00
1 box pepper, 25 cents; soap $1	1.25
3 boxes yeast, 25 cents; one-half tin matches, 50c	.75
1 Yukon stove complete	6.00
3 half-spring shovels	3.00
3 miner's picks	3.00
1 double-bladed ax complete	1.50
13 oil sacks, 50's and 100's	7.55
2 gold pans, $1; one coffee mill, 35 cents	1.35
12 pounds condensed onions	5.00
10 pounds evaporated spuds	2.50
40 pounds rope	5.00
Toilet soap	.50
6 tin plates, 50 cents; 3 granite cups, 50 cents	1.00
1 coffee pot, 40 cents; whetstone, 20 cents	.60
Awls, shoe thread, wax, bristles, etc	1.00
2 Fry pans, $1.00; fish line and hooks, 50 cents	1.50
2 — extract of beef	1.00
6 assorted files, 60 cents; oil blacking, 50 cents	1.10
1 package chocolate	.30
2 miner's candlesticks	1.00
1 iron brace and bits	1.75
24 pounds raisins, 10 cents	2.40

Outfit for boat:

30 pounds nails, $1.50; 5 pounds white lead, 60c..	2.10
Candle wicking, 20c; 1 2-inch auger, $1.25.....	1.45
Oakum, 25 cents; pitch, 25 cents	.50
1 hand saw, $1.50; 1 jack plane, 75c.....	2.25
Paint brush, 25c; 4 candle wicks, 40c.....	.65
2 pairs oars, $1.75; oarlocks, 40c.....	2.15
3 pairs heavy wool blankets	20.50
2 pairs pack straps, $3.00; 1 hand ax, $1.00.....	4.00
2 pairs hip rubber boots, leather soles, $6.00....	12.00
2 pairs high top lace shoes.....	7.50
4 pairs German socks, 75c.....	3.00
2 pairs lumberman's rubbers	3.00
2 pairs suspenders	.75
4 suits heavy wool underwear.....	12.00
4 dark blue flannel overshirts.....	8.00
4 pairs Mackinaw pants.....	11.00
2 Mackinaw coats	6.00
2 blanket coats	8.00
12 pairs socks, wool.....	4.50
6 pairs wool mittens	3.00
40 yards mosquito netting	1.00
11 buckskin pouches	5.00
1 magnet, 50 cents; 2 pairs goggles, 50 cents.....	1.00
2 pairs snow glasses.....	1.00
1 dozen bandana handkerchiefs	1.00
1 lot spoons, knives and forks.....	1.35
1 butcher knife	.75
4 oil blankets	6.00
1 lot buckets, pans, cooking utensils, etc.....	3.35
2 sou'westers, $1.00; tent, $12.00.....	13.00
1 41 Colt's revolver and ammunition.....	15.00
1 Winchester rifle and ammunition.....	18.00
2 fur caps	2.50
1 whipsaw	5.50

CIVIL GOVERNMENT FOR ALASKA.

An Act to amend section eight of the Act entitled "An Act providing a civil government for Alaska," approved May seventeenth, eighteen hundred and eighty-four, to create the office of surveyor-general for Alaska, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That section eight of an Act entitled "An Act providing a civil government for Alaska" be, and the same is hereby, amended by striking out the words "The Commissioner provided for by this Act to reside in Sitka shall be ex-officio register of said land office, and the clerk provided for by this Act shall be ex-officio receiver of public moneys, and the marshal provided for by this Act shall be ex-officio surveyor-general of said district."

Sec. 2. That there shall be appointed by the President, by and with the advice and consent of the Senate, a surveyor-general for the District of Alaska, embracing one surveying district.

Sec. 3. That the surveyor-general of Alaska shall receive a salary at the rate of two thousand dollars per annum.

Sec. 4. The President is authorized and empowered, in his discretion, to divide said Territory into two land districts and to designate the boundaries thereof, and he is also authorized and empowered to appoint, by and with the advice and consent of the Senate, a register of said additional land office and receiver of public moneys therefor, and in case of the creation of such additional land district the surveyor-general shall serve in both districts.

Approved July 24, 1897. S. L., 1st Sess. 55th Cong., p. 215.

[See Sec. 8 of the Act approved May 17, 1884, page 161 hereof].

[Note. The amendment made by the first section of the above quoted act left the appointment of the Sitka land officers to be governed by Sec. 2234, U. S. Revised Statutes, which reads as follows: "There shall be appointed by the President, by and with the advice and consent of the Senate, a register of the land office and a receiver of public moneys, for each land district

established by law," and left the appointment of the surveyor-general as provided by Section 2207, U. S. Revised Statutes, which reads as follows: "There shall be appointed by the President, by and with the consent of the Senate, a surveyor-general for the States and Territories herein named, embracing, respectively, one surveying district, namely, * * *"].

AN ACT TO REPEAL TIMBER-CULTURE LAWS, AND FOR OTHER PURPOSES.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, * * * *

Sec. 11. That until otherwise ordered by Congress lands in Alaska may be entered for town-site purposes, for the several use and benefit of the occupants of such town sites, by such trustee or trustees as may be named by the Secretary of the Interior for that purpose, such entries to be made under the provisions of section twenty-three hundred and eighty-seven of the Revised Statutes as near as may be; and when such entries shall have been made the Secretary of the Interior shall provide by regulation for the proper execution of the trust in favor of the inhabitants of the town site, including the survey of the land into lots, according to the spirit and intent of said section twenty-three hundred and eighty-seven of the Revised Statutes, whereby the same results would be reached as though the entry had been made by a county judge and the disposal of the lots in such town site and the proceeds of the sale thereof had been prescribed by the legislative authority of a State or Territory: Provided, That no more than six hundred and forty acres shall be embraced in one town-site entry.

Sec. 12. That any citizen of the United States twenty-one years of age, and any association of such citizens, and any corporation incorporated under the laws of the United States, or of any State or Territory of the United States now authorized by law to hold lands in the Territories now or hereafter in possession of and occupying public lands in Alaska for the purpose of trade or manufactures, may purchase not exceeding one hundred and sixty acres, to be taken as

near as practicable in a square form, of such land at two dollars and fifty cents per acre: Provided, That in case more than one person, association, or corporation shall claim the same tract of land the person, association, or corporation having the prior claim by reason of possession and continued occupation shall be entitled to purchase the same; but the entry of no person, association, or corporation shall include improvements made by or in possession of another prior to the passage of this act.

Sec. 13. That it shall be the duty of any person, association, or corporation entitled to purchase land under this act to make an application to the United States marshal, ex-officio surveyor-general of Alaska, for an estimate of the cost of making a survey of the lands occupied by such person, association, or corporation, and the cost of the clerical work necessary to be done in the office of the said United States marshal, ex-officio surveyor-general; and on the receipt of such estimate from the United States marshal, ex-officio surveyor-general, the said person, association, or corporation shall deposit the amount in a United States depository, as is required by section numbered twenty-four hundred and one, Revised Statutes, relating to deposits for surveys.

That on the receipt by the United States marshal, ex-officio surveyor-general, of the said certificates of deposit, he shall employ a competent person to make such survey, under such rules and regulations as may be adopted by the Secretary of the Interior, who shall make his return of his field notes and maps to the office of the said United States marshal, ex-officio surveyor-general; and the said United States marshal, ex-officio surveyor-general, shall cause the said field notes and plats of such survey to be examined, and, if correct, approve the same, and shall transmit certified copies of such maps and plats to the office of the Commissioner of the General Land Office.

That when the said field notes and plats of said survey shall have been approved by the said Commissioner of the General Land Office, he shall notify such person, association, or corporation, who shall then within six months after such notice, pay to the said United States marshal, ex-officio surveyor-general, for such land, and patent shall issue for the same.

Sec. 14. That none of the provisions of the last two preceding sections of this act shall be so construed as to warrant the sale of any lands belonging to the United States which shall contain coal or the precious metals, or any town site, or which shall be occupied by the United States for public purposes, or which shall be reserved for such purposes, or to which the natives of Alaska have prior rights by virtue of actual occupation, or which shall be selected by the United States Commissioner of Fish and Fisheries on the islands of Kadiak and Afognak for the purpose of establishing fish-culture stations. And all tracts of land not exceeding six hundred and forty acres in any one tract now occupied as missionary stations in said district of Alaska are hereby excepted from the operation of the last three preceding sections of this act. No portion of the islands of the Pribylov Group or the Seal Islands of Alaska shall be subject to sale under this act; and the United States reserves, and there shall be reserved in all patents issued under the provisions of the last two preceding sections the right of the United States to regulate the taking of salmon and to do all things necessary to protect and prevent the destruction of salmon in all the waters of the lands granted frequented by salmon.

Sec. 15. That until otherwise provided by law the body of lands known as Annette Islands, situated in Alexander Archipelago in Southeastern Alaska, on the north side of Dixon's Entrance, be, and the same is hereby, set apart as a reservation for the use of the Metlakahtla Indians, and those people known as Metlakahtlans who have recently emigrated from British Columbia to Alaska, and such other Alaskan natives as may join them, to be held and used by them in common, under such rules and regulations, and subject to such restrictions as may be prescribed from time to time by the Secretary of the Interior.

Approved, March 3, 1891, 26 Stat., 1095.

NON-MINERAL ENTRIES IN ALASKA.

The following rules and regulations are provided to carry into effect the provisions of Sections 11 to 15,

inclusive, of the act of March 3, 1891 (26 Stat. L., 1095), relating to the survey and entry of lands in Alaska (adopted June 3, 1891, 12 L. D., 583):

1. Applications for surveys must be made in writing by the person entitled to purchase land under said act or by the authorized agent of the association or corporation so entitled. The application must particularly describe the character of the land sought to be surveyed and, as accurately as possible, its geographical position, with the character, extent, and approximate value of the improvements. If a private survey had previously been made of the land occupied by the applicant a copy of the plat and field notes of such survey should accompany the application, which must also state that the land contains neither coal nor the precious metals, with reasons for such statement; that no part of the land described in the application includes improvements made by or in possession of another prior to the passage of said act; that it does not include any land to which natives of Alaska have prior rights by virtue of actual occupation; that it does not include a portion of any town site or lands occupied by missionary stations, or any lands occupied or reserved by the United States for public purposes or selected by the United States Commissioner of Fish and Fisheries, or any lands reserved from sale under the provisions of this act. These statements must be verified by affidavit.

2. If upon examination the application shall be approved by the ex officio surveyor-general he will furnish the applicants with two separate estimates, one for the field work and one for office work, the latter to include clerk hire and the necessary stationery. The ex officio surveyor-general will be careful to estimate adequate sums in order to avoid the necessity for additional deposits.

3. Upon receiving such estimates applicants may deposit in a proper United States depository, to the credit of the Treasury of the United States, on account of surveying the public lands in Alaska and expenses incident thereto, the sums so estimated as the total cost of the survey, including field and office work.

4. The original certificate must in every case be forwarded to the Secretary of the Treasury, the du-

plicate to the ex officio surveyor-general, the triplicate to be retained by the applicant as his receipt.

5. The triplicate certificate of deposit will be receivable in payment to the extent of the amount of such certificate for the land purchased, the surveying of which is paid for out of such deposit, as provided in Section 2403 of the Revised Statutes. (See par. 9, post.)

6. Where the amount of the certificate or certificates is less than the value of the lands taken the balance must be paid in cash. But where the certificate is for an amount greater than the cost of the land and is surrendered in full payment for such land, the United States marshal, ex officio surveyor-general, will indorse on the triplicate certificate the amount for which it is received and will charge the United States with that amount only. There is no provision of law authorizing the issue of duplicate certificates for certificates lost or destroyed.

7. Where the amount of the deposit is greater than the cost of survey, including field and office work, the excess is repayable, as under the provisions of Section 2402 of the Revised Statutes, upon an account to be stated by the ex officio surveyor-general, who will in all cases be careful to express upon the plats of each survey the amount deposited as the cost of survey in the field and office work and the amount to be refunded in each case. No provision of law exists, however, for refunding to other than the depositor.

8. Before transmitting accounts for refunding excesses the ex officio surveyor-general will indorse on the back of the triplicate certificate the following: "$——— refunded to ——— ——— by account transmitted to the General Land Office with letter dated ———," and will state in the account that he has made such indorsement. Where the whole amount deposited is to be refunded the ex officio surveyor-general will require the depositor to surrender the triplicate certificate and will transmit it to this office with the account.

9. The provisions of Section 2403 of the Revised Statutes, as amended by the act of March 3, 1879 (20 Stat. L., p. 352), relating to the assignment of certificates by indorsement, are not applicable to certificates of deposit for surveys in Alaska under said act of March 3, 1891, for the reason that the former statute contem-

plates the use of the certificates after assignment by settlers under the pre-emption and homestead laws of the United States and not otherwise. Therefore these triplicate certificates can only be used by the respective depositors in payment for lands in Alaska.

10. The amount shown on the face of the certificate to have been deposited for "office work" will be placed to the credit of the ex officio surveyor-general, and upon his requisition an advance will be made to him from the Treasury Department to pay the expenses of said "office work." He will render quarterly accounts of such funds to the General Land Office upon blanks furnished him for that purpose.

11. The amount deposited for "field work" will be placed to the credit of said work, and will be expended in the payment of the surveying accounts of the deputy surveyors when the surveys are accepted and the accounts adjusted in this office and transmitted to the First Comptroller of the Treasury for payment from said deposits.

12. The contract system is not deemed applicable to the class of surveys contemplated by the said act of March 3, 1891, owing to the small amounts which will doubtless be involved in many of the surveys and particularly in view of the great distance between this office, and that of the ex officio surveyor-general, and the consequent inconvenient delays in correspondence. The ex officio surveyor-general will therefore appoint as many competent deputy surveyors as may be necessary for the prompt execution of the surveys, who will each be required to enter into a bond in the penal sum of $5,000 for the faithful execution, according to law and the instructions of the Commissioner of the General Land Office and the United States marshal, ex officio surveyor-general of Alaska, of all surveys which are required of him to be made in pursuance of his appointment as United States deputy surveyor, and for the return of said surveys to the United States marshal, ex officio surveyor-general, as required by law and instructions. The bonds, in duplicate, will be forwarded for acceptance by this office. Upon appointment the deputy must take the oath of office required by Section 2223 of the Revised Statutes.

13. When the duplicate certificates of deposit of the amounts estimated for field and office work shall have

been received by the ex officio surveyor-general, the requisite instructions for the surveys and making returns thereof will be issued to the deputy surveyor who may be designated to do the work. The amount of compensation to the deputy surveyor must be stated in the instructions, and the same must not exceed the amount deposited for the field work. The land to be surveyed under any one application can not exceed 160 acres, and it must be in one compact body and as nearly in square form as the circumstances and configuration of the land will admit.

14. The instruments used in the execution of these surveys should be the same as those required for subdivisional surveys of public lands (see paragraphs 6, 7, 8 and 9, pp. 19 and 20, of Manual of Surveying Instructions, dated June 30, 1894), and must be registered and tested at the ex officio surveyor-general's office, as directed in paragraph 8, page 20, of the Manual.

15. The surveys will be numbered consecutively, beginning with number 1. The true magnetic variation must be noted at the beginning point of each survey, as well as any marked changes during the progress of the work, and at the end of each line of the survey the character of the soil and the amount of timber, etc., must be noted at the end of the record thereof. The requirements in the "summary of objects and data required to be noted," as set forth in the instructions for the survey of public lands (pp. 58 and 59 of the Manual), must be observed by the deputy in these surveys. All corners must be marked by stone monuments, containing not less than 1,728 cubic inches. At the beginning point upon the outboundaries of each tract surveyed a corner must be established with two pits (when practicable) of the size required for standard township corners, one upon each side of the corner on the line, and 6 feet distant. Upon the side of such corner facing the claim, the stone will be marked "S. No. ——" (for survey No.——), and immediately under the same, the letters "Beg. Cor. I" (for beginning corner 1). These marks must be neatly and deeply cut, for the sake of legibility and permanence. From the beginning corner the deputy will proceed to survey the several lines of the tract, in accordance with the instructions of the ex officio surveyor-general, marking each corner on the side facing the claim with number

of the survey, and "Cor. No. II," "Cor. No. III," etc., with pits of the size hereinbefore prescribed, upon the lines closing upon and starting from each corner and 6 feet distant. Such other marks in addition to those above described, will be placed upon the corners as may be required by the ex officio surveyor-general in his special written instructions. As far as practicable, bearings and distances must be taken from each of the corners to two or more trees or prominent natural objects, if any, within a convenient distance, in the same manner as required in the instructions for the survey of public lands, and such trees or objects must be marked with the number of the survey and underneath the same the letters "B. T." or "B. O." as the case may be.

16. Where a tract to be surveyed fronts upon tide water, the front or meander line of the tract will be run at ordinary high-water mark, and the side lines of the tract will terminate at such high-water mark, thus excluding from survey and disposal all lands situated between high and low water marks. At the corners marking the termini of lines at high-water mark, one pit only will be dug, of the size prescribed in the Manual for meander corners, on the side toward the land and 6 feet distant. At all corners where pits are impracticable, a mound of stone (consisting of not less than four stones, the mound to be at least 1½ feet high with 2 feet base) must be constructed, and in cases where pits are practicable, if the deputy prefers raising a mound of stone, or stone covered with earth, as more likely to perpetuate the corner, he will be permitted to do so. For a mound of stone "covered with earth" the height and base will be the same as required by the Manual for a mound of earth for township corners. Boundaries or portions of boundaries of previously established surveys which also form a portion of the boundaries of the claim to be surveyed will be adopted so far as common to both surveys.

17. The proper blank books for field notes will be furnished by the ex officio surveyor-general, and in such books the deputy surveyor must make a faithful, distinct and minute record of everything officially done and observed by himself and his assistants pursuant to instructions in relation to running, measuring

and marking lines and establishing corners, and present as far as possible a full and complete topographical description of the tract surveyed. From the data thus recorded at the time when the work is done on the ground the deputy must prepare the true field notes of the surveys executed by him and return the same to the ex officio surveyor-general at the earliest practicable date after the completion of his work in the field. The true field notes are in no case to be made out in the office of the ex officio surveyor-general. The true field notes and the transcript field notes for this office must be written in a bold, legible hand, in durable black ink, upon paper of foolscap size. Each survey will be complete in itself. The first or title page of each set of field notes is to describe the subject-matter of the same, the locus of the survey, by whom surveyed, the date of the instructions, and the dates of the commencement and completion of the work. A general description of each tract must be given at the end of the field notes of the survey of the same, which description must embrace a brief statement of the main features of the tract surveyed, character of the land, timber, and other natural growth, whether there are any indications of mineral, characteristics of mountains, streams, etc., and the extent and character of the improvements. All facts relative to the present occupancy of the land must be particularly noted. In preparing the true field notes of the survey the form prescribed in the Manual will be followed as nearly as practicable. The names of assistants, with duties assigned to each, and the preliminary and final oaths of assistants and final oath of the deputy must be attached to the field notes of each survey. The deputy surveyor must return with the field notes a topographical map or plat of the survey. As far as practicable all objects described in the field notes and the main features of the tract surveyed, including location of buildings, streams, mountains, etc., must be protracted upon such plat as accurately as possible. The course and length of each line will be expressed upon the plat. The deputy will note all objections to his survey that may be brought to his knowledge, and the ex officio surveyor-general will promptly report to this office all complaints made

to him and send up all protests filed in his office, together with a full report thereon.

18. From the plat and field notes submitted by the deputy surveyor, the official plat will be prepared in triplicate, the original to be retained in the office of the ex officio surveyor-general, the duplicate to be forwarded to this office, and the triplicate, after notice of approval by the Commissioner, to be filed in United States district land office. All plats of these surveys must be made upon drawing paper of the best quality, and of uniform size, 19 by 24 inches (the size used for township plats of public land surveys). Upon each plat will be placed an appropriate title and the certificate of approval by ex officio surveyor-general. The title will be placed upon the upper right-hand corner of the plat. Immediately below will be placed the ex officio surveyor-general's approval, with sufficient space on the lower right-hand corner for the Commissioner's approval. In all cases where the tracts are bounded in part by meanders, a table of the courses and distances of such meanders will be placed upon the plat. When the claim approaches 160 acres in extent, the plat may be protracted upon a scale of 5 chains to 1 inch. For surveys of smaller extent the scale may be suitably increased. A clear margin 2 inches in width should be left upon all sides of each plat. The magnetic declination must be indicated upon the plats; also the scale of protraction. The use of all fluids, except a preparation of india ink of good quality, must be avoided by the draftsman in the delineation of these surveys. All lines, figures, etc., must be sharply defined. All lettering on the plats must be clear and sharp in outline and design, and ornamentation of any kind is prohibited.

19. One copy of the instructions to the deputy must be forwarded with the returns of survey, and one copy must accompany the account of the deputy. The returns and account will be forwarded with separate letters of transmittal.

20. The survey having been approved, it shall be the duty of such person, association, or corporation, within six months after notice thereof, to apply in writing to the United States Court Commissioner, ex officio register of the Sitka land office, to make proof and entry, in due form, reciting the name of the party

who will make the entry, the name and geographical location of the land applied for, the place and date of making proof, and the names of four witnesses by whom it is proposed to establish the right of entry. This notice will be published by said commissioner once a week for six consecutive weeks, at the applicant's expense, in a newspaper published nearest to the land applied for. Copies of said notice must be posted in the office of the ex officio register, and in a conspicuous place upon the land applied for, for thirty days next preceding the date of making proof. The required proof shall consist of the affidavits of the applicant and two of the published witnesses, and shall show:

First. The actual use and occupancy of the land as a trading post or for manufacturing purposes.

Second. The date when the land was first so occupied.

Third. The number of inhabitants and character and value of improvements thereon, and the annual value of the trade or business conducted upon the land.

Fourth. The non-mineral character of the land as prescribed in said act.

Fifth. That no portion of the land applied for is occupied or reserved for any purpose by the United States, or occupied or claimed by any natives of Alaska, or occupied as a town site or missionary station, and that the tract does not include improvements made by or in possession of another person, association, or corporation prior to the passage of said act.

Sixth. If the entry is made for the benefit of an individual, he must likewise prove his citizenship or file record evidence of his declaration of intention to become a citizen.

Seventh. If the entry is made for the benefit of an association, that and the further fact that over 20 per cent. of the stock of the association is not held by aliens, must be established by the certificate of the secretary of the association.

Eighth. If the entry is made for the benefit of a corporation, that must be established by the certificate of the secretary of the State of Oregon, or any other officer having custody of the record of incorporation,

and the further fact that over 20 per cent. of the stock of such incorporated company is not held by aliens must be established by the certificate of the secretary of the company.

Ninth. Proof of publication of notice for the required time, consisting of the affidavit of the publisher to that effect, accompanied by a copy of the published notice, together with the certificate of the ex-officio register as to the posting of the notice in his office and the affidavit of the party who posted the notice upon the land applied for, reciting the fact and date of posting said notices and that the same so remained for the specified time hereinbefore required.

21. When the proof has been examined and found satisfactory to the said ex officio register and surveyor-general, and the certificate of purchase and receipt for the purchase price respectively issued by them, all the papers will be forwarded to this office, and if found to be complete and the entry to have been made in accordance with these instructions patent will issue in due course.

22. If upon the day appointed for making proof and payment for any tract of land by a person, association, or corporation, any other person, or the representative of any association or corporation, should appear and protest against the allowance of the entry, such protestant should be heard and permitted to cross-examine the claimant and his witnesses, and the complaint and the facts thus developed will be duly considered by the ex officio register and surveyor-general and such action taken as they may deem proper. Should the protestant desire to carry his action into a contest so as to introduce the testimony of witnesses either for the Government or in his own behalf, he should be required by said officers to file a sworn and corroborated statement of his grounds of action, and that the contest is not initiated for the purpose of harassing the claimant and extorting money from him under a compromise, but in good faith to prosecute the same to a final determination; and this affidavit being filed, the said officers will immediately proceed to determine the controversy, fixing a time and place for the hearing of the respective claims of the interested parties, giving each the usual notice thereof and a fair opportunity to present their in-

terests in accordance with the principles of law and equity applicable to the case as prescribed by the rules for the conduct of such cases before registers and receivers of other local land offices. At the close of the case, or as soon thereafter as their duties will permit, said officers will render their decision in writing, give due notice to all parties in interest thereof, and at the earliest practicable date forward the papers to this office, together with any appeal that may have been filed from their decision. Appeals from the action of this office will lie to the Secretary of the Interior, as in other matters of like character.

23. All town-site entries in said Territory are to be made by trustees, to be appointed by the Secretary of the Interior, according to the spirit and intent of Section 2387, United States Revised Statutes, which section provides that the entries of land for such purposes are to be made in trust for the several use and benefit of the occupants thereof, according to their respective interests, and at the minimum price, which in these cases shall be construed to mean $1.25 per acre. When the inhabitants of a place and their occupations and requirements constitute more than a mere trading post, but are less than one hundred in number, the town-site entry shall be restricted to 160 acres; but where the inhabitants are in number one hundred and less than two hundred, the town-site entry may embrace any area not exceeding 320 acres; and in cases where the inhabitants number more than two hundred, the town-site entry may embrace any area not exceeding 640 acres. It will be observed that no more than 640 acres shall be embraced in one town-site entry in said Territory.

The system of public surveys not having been extended over any portion of the Territory of Alaska, and no provision being made in said act for the payment of the cost of officially making a special survey of the exterior lines of the town sites to be entered thereunder, it becomes necessary for the occupants of any town site in said Territory, as a prerequisite to having an entry made of the land claimed by them, to proceed in the same manner and form to secure the special survey of the land, as above prescribed for applicants for lands in said Territory for trade and manufacturing purposes. To that end the rules above

set forth and numbered 1 to 19, inclusive, are hereby made applicable in manner, form, and detail to such occupants or their agent in applying for and securing the execution of the special survey of the outboundaries of such town sites, the occupants or agent to be reimbursed for the money thus expended as hereinafter provided.

24. The fee simple title to certain real estate in the towns of Sitka and Kodiak was conferred under Russian rule upon certain individuals and the Greek Oriental Church, and confirmed by the treaty concluded March 30, 1867, between the United States and the Emperor of Russia (15 Stat. L., 539); other real property is now held and occupied by the United States in several of the Alaska towns for school and other public purposes; while it is perhaps desirable that still other lots or blocks in those towns that take advantage of the provisions of said act should be reserved to meet the future requirements for school purposes, or as sites for Government buildings; therefore, such employe or employes of the Government as shall be designated or detailed for that purpose shall constitute a board whose duty it shall be, as soon as notified by the United States marshal that the duplicate receipt for the money deposited to defray the costs of a special survey of the exterior lines of such town site has been received by him, to go upon the land applied for and inquire into the title to the several private claims held therein under Russian conveyances, and to fix and determine the proper metes and bounds of the same as originally granted and claimed at the date of our acquisition of said Territory. Such board will duly notify the present owners of said private claims both of their right to submit testimony and documents, either in person or by attorney, in support of their several claims and of their right, within thirty days from receipt of notice of the conclusions of said board, to file an appeal therefrom, with said board, for transmission to this office. Should any one of such parties be dissatisfied with the decision of this office in such a case, he may still further prosecute an appeal to the Secretary of the Interior upon such terms as shall be prescribed in each individual case. Proper evidence of notice should be taken by said board in all cases, and a record of all testi-

mony submitted to them should be kept. If an appeal is taken, the same, together with the decision of the board and all papers and evidence affecting the claims of the appellant, should be forwarded direct to this office. Should no appeal be taken, the report of the board should be filed with the United States marshal, ex officio surveyor-general, for his use and guidance, as hereinafter directed.

It shall also be the official duty of said board to approximately fix and determine the metes and bounds of all lots and blocks in any such town site now occupied by the Government for school or other public purposes, and of all unclaimed lots or blocks, which, in their judgment, should be reserved for school or any other purpose; and to make report of such investigations to the ex officio surveyor-general, for his use and guidance, as also hereinafter directed, should no appeal be filed therefrom.

Should an appeal from the action or decision of such board be filed in any case, no further action will be taken by the ex officio surveyor-general until the matter has been finally decided by this office or the Department. But, should no appeal be filed, the ex officio surveyor-general will proceed to direct the survey of the outboundaries of the town site to be made, the same in all respects as above directed in the survey of land for trade and manufacturing purposes, except that he will accept the report and recommendations made by said board and exclude and except, by metes and bounds, from the land so surveyed, all the lots and blocks for any purpose recommended to be excepted by said board. The execution of the survey of the lots and blocks thus excepted shall be made a part of the duties of the surveyor, who is deputized to survey the exterior lines of the town site; the survey of such lots or blocks shall be connected by course and distance with a corner of the town-site survey, and also fully described in the field notes of said survey and protracted upon the plat of said town site; and the limits of such lots or blocks will be permanently marked upon the ground in such manner as the ex officio surveyor-general shall direct. In forwarding the plat and field notes of the survey of any town site for the approval of this office, the ex officio surveyor-general will also forward any report that said board

may have filed with him, for approval in like manner. [As amended February 17, 1896, 22 L. D., 119.]

25. When the plat and field notes of the survey of the outboundaries of any town site shall have been approved (and not before) by this office, the Secretary of the Interior will appoint one trustee to make entry of the tract so surveyed, in trust for the occupants thereof, as provided by said act. The trustee having received his appointment, and qualified himself for duty by taking and subscribing the usual oath of office and executing the bond hereinafter required, will call upon the occupants of said town site for the triplicate receipt for the money deposited to meet the expenses of the survey thereof, and for the requisite amount of money necessary in addition to pay the Government for the land as surveyed, and other expenses incident to the entry thereof, keeping an accurate account thereof and giving his receipt therefor. And when realized from assessment and allotment, he will refund the same, taking evidence thereof to be filed with his report in the manner hereinafter directed. He will then file with the United States Court Commissioner for Sitka, who is ex officio register of the Sitka land office, a written notice, in due form, reciting the name of the party who will make the entry, the name and geographical location of the town site, the place and date of making proof, and the names of four witnesses by whom it is proposed to establish the right of entry. This notice will be published by said commissioner once a week for six consecutive weeks, at the applicant's expense, in a newspaper published in the town for which the entry is to be made, or nearest to the land applied for. Copies of said notice must also be posted in the office of the ex officio register and in a conspicuous place upon the land applied for, for thirty days next preceding the date of making proof. The required proof shall consist of the affidavits of the applicant and two of the published witnesses, and shall show: (1) the actual occupancy of the land for municipal purposes; (2) the number of inhabitants; (3) the character, extent, and value of town improvements; (4) the non-mineral character of the town site; (5) that said town site does not contain any land occupied by the United States for school or other public purposes, nor any land to which the title in fee was

conferred under Russian rule and confirmed by the treaty of transfer to the United States, nor any land for which patents have been issued by the United States, and (6) proof of the publication and posting of notices for the required time, the same in all respects as is required by the ninth subdivision of paragraph 20 hereof. The proof being accepted and the certificate of entry issued by the ex officio register of the Sitka land office, the purchase price of the land should be paid to and receipted for by the clerk of the district court, who is ex officio receiver of the Sitka land office, after which all the papers will be forwarded to this office, and, if found to be complete and made in accordance with these instructions, patent will issue without delay. Cash certificate of entry (No. 4-189) will be issued by the ex officio register in allowing all entries authorized by the law and these regulations, and said entries will be numbered consecutively, beginning with number 1.

A protest against the allowance of a town-site entry will be heard, and the same permitted to be carried into a contest, in the same manner and under the same conditions as hereinbefore provided in the matter of applications to make entries for the purposes of trade and manufactures.

26. It is also made my duty to provide rules and regulations for the survey and platting of the town sites in Alaska into streets, alleys, blocks and lots, or for the approval of such surveys as may already have been made by the inhabitants thereof, and for the conveyance of the lots and blocks to the occupants of said town sites according to their respective interests. To accomplish the latter provision necessitates the careful consideration of a somewhat difficult problem, involving the right of the natives of Alaska, who constitute the larger part of the population of all the towns in said Territory, but who are not citizens of the United States, to receive title from the Government to the lots severally occupied and claimed by them.

Although the political status of these people remains yet to be determined by legislation, still the facts remain that they are held amenable to all the laws made applicable to said Territory in which they have lived at peace with the white settlers for ages, that they far outnumber the citizen and foreign-born population

of all those towns in which white men have settled, and that many of them have invested their earnings in property in those towns and are exercising peaceable and undisputed occupancy and right of possession over the same. I therefore deem it proper, in order to further encourage them in adopting civilized life and accepting and following the instruction and example of the teachers, missionaries and all other right-thinking people who come among them, and equitable and just and within my power, to construe the language of Section 2387, United States Revised Statutes, under which town-site entries are made "in trust for the several use and benefit of the occupants thereof according to their respective interests," in the most liberal and comprehensive sense and to the advantage of these natives.

Therefore, the trustees of the several town sites entered in said Territory shall levy assessments upon the property either occupied or possessed by any native Alaskan the same as if he were a white man, and shall apportion and convey the same to him according to his respective interest, without regard to the question of citizenship. But, in case of white settlers, or associations or corporations, the trustees shall require the same evidence of citizenship or the right to hold real estate, as the case may be, as is required above of purchasers of land for purposes of trade or manufactures.

27. The entry having been made and forwarded to this office, the trustee will cause an actual survey of the lots, blocks, streets and alleys of the town site to be made, conforming as near as in his judgment it is deemed advisable to the original plan or survey of such town, making triplicate plats of said survey and designating upon each of said plats the lots occupied, together with the value of the same and the name of the owner or owners thereof; and in like manner he will designate thereon the lots occupied by any corporation, religious organization, or private or sectarian school. When the plats are finally completed, they will be certified to by him as follows:

I, the undersigned, trustee of the town site of ....., Alaska Territory, hereby certify that I have examined the survey of said town site and approved the foregoing plat thereof as strictly conformable to said sur-

vey made in accordance with the act of Congress approved March 3, 1891, and my official instructions.

One of said plats shall be filed in the land office in the district where the town site is located, one in the office of the Commissioner of the General Land Office, and one retained for his own use. The designation of an owner on such plats shall be temporary until final decision of record in relation thereto, and shall in no case be taken or held as in any sense or to any degree a conclusion or judgment by the trustee as to the true ownership in any contested case coming before him.

28. As soon as said plats are completed, the trustee will then cause to be posted in three conspicuous places in the town a notice to the effect that such survey and platting have been completed, and notifying all persons concerned or interested in such town site that on a designated day he will proceed to set off to the persons entitled to the same, according to their respective interests, the lots, blocks or grounds to which each occupant thereof shall be entitled under the provisions of said act. Such notices shall be posted at least fifteen days prior to the day set apart by the trustee for making such division and allotment. Proof of such notification shall be evidenced by the affidavit of the trustee, accompanied by a copy of such notice.

29. After such notice shall have been duly given, the trustee will proceed on the designated day, except in contest cases, which shall be disposed of in the manner hereinafter provided, to set apart to the persons entitled to receive the same, the lots, blocks and grounds to which each person, company or association of persons shall be entitled, according to their respective interests, including in the portion or portions set apart to each person, corporation or association of persons the improvements belonging thereto, and in so doing he will observe and follow as strictly as the platting of the town site will permit the rights of all parties to the property claimed by them as shown and defined by the records of the clerk of the District Court of Alaska, who is ex officio recorder of deeds and mortgages and other contracts relating to real estate in said Territory.

30. After setting apart such lots, blocks, or parcels, and upon a valuation of the same as hereinbefore provided for, the trustee will proceed to determine and

assess upon such lots and blocks according to their value, such rate and sum as will be necessary to pay all expenses incident to the town-site entry. In those cases in which there appears more than one claimant for any lot or block, the trustee will require each claimant to pay the assessment, and upon the final determination of the contest, as hereinbefore provided for, the unsuccessful claimant or claimants will be reimbursed in a sum equal to the assessment paid by them, such reimbursements to be properly accounted for by the trustee. In making the assessments the trustee will take into consideration—

First. The reimbursement of the parties who deposited the money to pay the costs of surveying and platting the outboundaries of the town site, and who advanced such money as was necessary in addition to pay the purchase price of the land.

Second. The money expended in advertising and making proof and entry of the town site.

Third. The compensation of himself as trustee.

Fourth. The expenses incident to making the conveyances.

Fifth. All necessary traveling expenses and all other legitimate expenses incident to the expeditious execution of his trust.

More than one assessment may be made, if necessary, to effect the purposes of said act of Congress and these instructions. Upon receipt of the assessments the trustee will issue deeds for the uncontested lots, blank forms of conveyance being furnished by this office for that purpose.

31. His work having been completed to this point, the trustee will then, and not before, in cases where he finds two or more inhabitants claiming the same lot, block, or parcel of land, proceed to hear and determine the controversy, fixing a time and place for the hearing of the respective claims of the interested parties, giving each ten days' notice thereof, and a fair opportunity to present their interests in accordance with the principles of law and equity applicable to the case, observing as far as practicable the rules prescribed for contests before registers and receivers of the local offices; he will administer oaths to the witnesses, observe the rules of evidence as near as may be in making his investigations, and at the close of the

case, or as soon thereafter as his duties will permit, render a decision in writing. If the notice herein provided for can not be personally served upon the party therein named within three days from its date, such service may be made by a printed notice published for ten days in a newspaper in the town in which the lot to be affected thereby is situated; or, if there is none published in such town, then said notice may be printed in any newspaper published in the Territory. Copies of such notice should also be posted upon the lot in controversy and in at least three other conspicuous places in the town wherein the lot is situated. The proof of such publication and posting of notices, to be filed with the record, may be made as provided in these rules and regulations in other cases. The proceedings in these contests should be abbreviated in time and words, or the work may not be completed within the limit of any reasonable period of time or expense.

Before proceeding to dispose of the contested cases the trustee will require each claimant to deposit with him each morning a sum sufficient to cover and pay all costs and expenses on such proceedings for that day. At the close of the contest, on appeal or otherwise, the sum deposited by the successful party shall be returned to him, but that deposited by the losing party shall be retained and accounted for by said trustee.

32. Any person feeling aggrieved by the decision of the trustee, may, within thirty days after notice thereof, appeal to the Commissioner of the General Land Office, under the rules as provided for appeals from the opinions of registers and receivers, and if either party is dissatisfied with the conclusions of said Commissioner in the case, he may still further prosecute an appeal within sixty days from notice thereof to the Secretary of the Interior, upon like terms and conditions and under the same rules that appeals are now regulated by and taken in adversary proceedings from the Commissioner to the Secretary. All costs in such proceedings will be governed by the rules now applicable to contests before the local land offices. [As amended October 8, 1897, 25 L. D., 323.]

33. The trustee shall receive and pay out all money provided for in these instructions, subject to the supervision of this office, and he shall keep a correct

record of his proceedings and an accurate account of all money received and disbursed by him, taking and filing proper vouchers therefor, in the manner hereinafter provided; and before entering upon duty he shall, in addition to taking the official oath, also enter into a bond to the United States in the penal sum of $5,000, for the faithful discharge of his duties, both as now prescribed and furnished by the Department of the Interior.

34. All lots remaining unoccupied and unclaimed when the trustee shall have made his allotments and assessments will be sold at public outcry, for cash, to the highest bidder. The proceeds of such sales, together with any balance remaining in the hands of the trustee to the credit of the town-site occupants, to be expended, under the direction of the Secretary of the Interior, for the benefit of the town.

35. All payments by the occupants of any town site for any of the purposes above named, except the survey of the outboundaries of the land so entered, shall be in cash, and made only to the trustee thereof, who shall make duplicate receipts for all money paid him, one to be given the party making the payment, and the other to be forwarded to this office with the trustee's papers and accounts. Said trustee shall also take receipts for all money disbursed by him, and be held strictly accountable by this office, under his bond, for the proper handling of the trust funds in his possession.

36. The trustee of any town site in said Territory will be allowed compensation at the rate of $5 per day for each day actually engaged and employed in the performance of his duties as such trustee, and his necessary traveling expenses.

37. The trustee's duties herein prescribed having been completed, the account of all his expenses and expenditures, together with a record of his proceedings and a list of the lots to be sold at public sale, as hereinbefore provided, with all papers in his possession, and all evidence of his official acts, shall be transmitted to this office to become a part of the records hereof, excepting from such papers, however, the subdivisional plat of the town site, which he shall deliver to the clerk of the District Court, to be made of record and placed on file in his office as ex officio

recorder of deeds, mortgages, and other contracts relating to real estate in the Territory of Alaska.

The provision of the manual of surveying of June 30, 1894, p. 64, authorizing the deputy surveyor, in cases where great delay, expense, or inconvenience would result from a strict compliance with the requirement that such oaths shall be taken before some officer duly authorized to administer oaths, to administer the necessary oaths to his assistants, is held applicable to surveys in Alaska, but in such cases the deputy surveyor must submit a full written report of the circumstances of the case to the surveyor-general.

DECISIONS.

Land actually occupied in good faith by the natives of Alaska is reserved from disposition. While there is no limit prescribed by the statute to the amount of land which may be held by a native, a mere claim, without actual bona fide occupation, will not be protected.

Department to A. S. Wadleigh, 13 L. D., 120.

* * *

While there is no express statutory authority for the reservation of Alaskan lands by the President, he has such authority as Chief Executive.

Opinion Asst. Attorney General, 13 L. D., 426.

* * *

As the Act of May 17, 1884, provides that Indians or other persons in Alaska "shall not be disturbed in the possession of any lands actually in their use or occupation or now claimed by them," etc., reservations in Alaska should not cover such lands.

Opinion Asst. Attorney General, 13 L. D., 426.

* * *

Said provision of law is construed to protect only rights held by virtue of use or occupation at the date of the enactment, May 17, 1884, not those acquired by subsequent occupation and improvement.

Naval Reservation (Sitka) 25 L. D., 212.

* * *

The right of any person, association, or corporation to enter non-mineral lands in Alaska is limited to one

entry of not more than one hundred sixty acres, embracing the land occupied, as nearly as practicable in a square form.

Clinton Gurnee, 13 L. D., 608.
W. H. H. Hart, 23 L. D., 280.
Fort Alexander Fishing Station, 23 L. D., 335.

* * *

In the survey of Alaskan lands in isolated localities, the deputy surveyor making the survey may administer the required oaths to his assistants in the execution of such survey.

Clinton Gurnee, 13 L. D., 608.

* * *

"With a view to avoiding conflicts between the claimants of mission lands in Alaska and others who may lay claim to the same or adjacent lands for townsite, trading or manufacturing purposes, * * * I therefore suggest that the several religious societies occupying land as mission stations among the Indians of Alaska prior to March 3, 1891, have the same surveyed and the out-boundaries thereof permanently marked upon the ground. * * * I further suggest that plats of such surveys be made and placed of record in the office of the clerk of the court for the district of Alaska." Such survey and recording will not be conclusive, but will be notice of the claim of such societies.

Mission Stations, 15 L. D., 586.

* * *

Lands used for school purposes must be eliminated from entries of lands in Alaska.

Instructions, 18 L. D., 288.

* * *

"The status of the natives or aborigines [of Alaska] as a race or races, has never been defined by statute, nor has their political status been fixed, although the word Indian is sometimes used with reference to some of the inhabitants of Alaska." The Office of Indian Affairs exercises no jurisdiction over Alaskan natives and they are not considered to be Indians in a legal sense.

Opinion Asst. Attorney General, 19 L. D., 323, citing Waters v. Campbell, 4 Sawy., 121.

Where it is impracticable to enter lands in a square form, under the provisions of Section 12 of the Act of March 3, 1891, by reason of conflict with other claims, the form of the entered land must be governed by the facts of the case.

Instructions, 20 L. D., 434.

* * *

Certificates of deposits of money for the survey of lands in Alaska are not assignable. See Sec. 2403, U. S. Rev. Stats., Act of March 3, 1879. (20 Stat., 352) and regulation 9, 12 L. D., 583.)

South Olga Fishing Station, 22 L. D., 289.

* * *

Congress has made no provision for the survey and ascertainment by the Land Department of the claims and rights of the Greco-Russian Church in Alaska.

Greco-Russian Church, 22 L. D., 330.

Greco-Russian Church Lands, 25 L. D., 480.

* * *

"The present jurisdiction of the Department over any Greco-Russian church lands or missionary stations in Alaska extends only to excluding the same from entry and acquisition by others under the mining, town-site and trade and manufacture laws aforesaid."

Greco-Russian Church Lands, 25 L. D., 480.

* * *

If, under an application to purchase non-mineral land in Alaska, the survey is correctly made but the right of claimant to enter the land surveyed is denied by the Department, the survey should, nevertheless, be approved, in order that the deputy surveyor may be paid for his services.

Survey No. 3, 22 L. D., 696.

* * *

An entry of non-mineral Alaskan lands can be allowed only for land not exceeding 160 acres actually occupied by claimant. A survey will not be approved where so made as to cover the coast for the purpose of controlling the landing place of vessels.

McCollom Fishing and Trading Co., 23 L. D., 7.

The use of land for trading or business purposes must be present and actual, not prospective.

F. P. Kendall, 23 L. D., 245.
W. H. H. Hart, 23 L. D., 280.

* * *

Entry will not be allowed for more non-mineral land than is actually occupied for trading and business purposes.

C. A. Johnson, 23 L. D., 283.
South Olga Fishing Station, 24 L. D., 314.

* * *

Failure to comply with the requirement that the land be surveyed as nearly as practicable in a square form will not be excused because of the fact that the land excluded is mountainous and valueless for fishing purposes. The intent of the statute is to prevent the monopolization of the coast by allowance of entries for narrow strips extending along the shore.

Central Alaska Co., 24 L. D., 545.

* * *

A survey of non-mineral lands which does not follow the requirement as to square form will not be approved because of the fact that the irregular shape is caused by the exclusion of swamp land, as there is no legal reason for such exclusion.

Bartlett Bay Packing Co., 23 L. D., 337.

* * *

The approval of a survey and allowance of an entry does not preclude the Land Department from canceling an entry irregularly allowed. Final proof in support of claims to non-mineral lands must be taken in the Alaskan land district, before the local land officers.

Lynde and Hough Co., 23 L. D., 442.

* * *

Surveys of non-mineral land should not be made until duly applied for, and the application should show, under oath, the character, extent and approximate value of improvements made by the applicant or his grantors.

Central Alaska Co., 24 L. D., 545.

* * *

A survey will not be approved if it is the evident

intent of claimant to secure control of the fresh water supply of a native village.

Fort Alexander Fishing Station, 23 L. D., 335.

* * *

A survey of Alaskan lands under the provisions of the Act of March 3, 1891, should not be allowed to include a ditch or water-way, used by natives for the purpose of securing fresh water for domestic use.

Benjamin Arnold, 24 L. D., 312.

* * *

No rights of way can be acquired in Alaska under the Act of March 3, 1875, (18 Stat., 482) as that Act forms a part of the general land law of the United States, the operation of which has not been extended to Alaska.

W. R. Weeks, 25 L. D., 290.

* * *

The Greco-Russian Church has peculiar rights in Alaska only in the respect that land occupied by it at the date of the cession of Alaska to the United States belongs to it absolutely, by the terms of the treaty. Aside from this, said church has the rights accorded all religious societies holding tracts (not exceeding 640 acres in any one tract) for missionary purposes at the dates of the enactment of the laws of 1884 and 1891.

Greco-Russian Church Lands, 25 L. D., 480.

* * *

The failure of Commissioners Rousseau and Pestchouroff to inventory all property of the Greco-Russian Church cannot operate to defeat the right of the church to lands occupied by it, as the commissioners had no judicial power to pass upon the rights of the church, but made an inventory (known to be incomplete) only as a convenient memorandum.

Kinkead v. U. S., 150 U. S., 483.

Greco-Russian Church Lands, 25 L. D., 480.

* * *

If third persons encroach on the claims of religious societies in Alaska, relief should be sought in the courts, not before the Land Department.

Greco-Russian Church Lands, 25 L. D., 480.

Authority of the Minister of the Interior to lay off lands in the Yukon District and remote parts of the Northwest Territory:

"Sec. 19. Notwithstanding anything in said act contained (Dominion Land Act of 1886), the Minister may direct that land in the Yukon district and in remote parts of the unorganized portions of the Northwest Territories shall be laid off into lots of such size and shape as may be found advisable; and such lots may be dealt with and may be described according to plans of record." (Assented to 29th June, 1897.)

NORTHWEST TERRITORY REGULATIONS.

REGULATIONS GOVERNING PLACER MINING ALONG THE YUKON RIVER AND ITS TRIBUTARIES IN THE NORTHWEST TERRITORIES.

[Approved by Order in Council No. 1189, of 21st May, 1897, as amended.]

INTERPRETATION.

"Bar diggings" shall mean any part of a river over which the water extends when the water is in its flooded state, and which is not covered at low water.

Mines on benches shall be known as "bench diggings," and shall for the purpose of defining the size of such claims be excepted from dry diggings.

"Dry diggings" shall mean any mine over which a river never extends.

"Minor" shall mean a male or female over the age of eighteen, but not under that age.

"Claim" shall mean the personal right of property in a placer mine or diggings during the time for which the grant of such mine or diggings is made.

"Legal post" shall mean a stake standing not less than four feet above the ground and squared on four sides for at least one foot from the top. Both sides so squared shall measure at least four inches across the face. It shall also mean any stump or tree cut off and squared or faced to the above height and size.

"Close season" shall mean the period of the year during which placer mining is generally suspended. The period to be fixed by the Gold Commissioner in whose district the claim is situated.

"Locality" shall mean the territory along a river (tributary of the Yukon River) and its affluents.

"Mineral" shall include all minerals whatsoever other than coal.

NATURE AND SIZE OF CLAIMS.

1. "Bar diggings," a strip of land 100 feet wide at high-water mark, and thence extending into the river to its lowest water level.

2. The sides of a claim for bar digging shall be two parallel lines run as nearly as possible at right angles to the stream and shall be marked by four legal posts, one at each end of the claim at or about high-water mark, also one at each end of the claim at or about the edge of the water. One of the posts at high-water mark shall be legibly marked with the name of the miner and the date upon which the claim was staked.

3. Dry diggings shall be 100 feet square and shall have placed at each of its four corners a legal post upon one of which shall be legibly marked the name of the miner and the date upon which the claim was staked.

4. Creek and river claims shall be 500 feet long measured in the direction of the general course of the stream, and shall extend in width from base to base of the hill or bench on each side, but when the hills or benches are less than 100 feet apart, the claim may be 100 feet in depth. The sides of a claim shall be two parallel lines run as nearly as possible at right angles to the stream. The sides shall be marked with legal posts at or about the edge of the water and at the rear boundaries of the claim. One of the legal posts at the stream shall be legibly marked with the name of the miner and the date upon which the claim was staked. [See note p. 343.]

5. A Bench claim shall be 100 feet square, and shall have placed at each of its four corners a legal post upon which shall be legibly marked the name of the miner and the date upon which the claim was staked.

6. Entry shall only be granted for alternate claims, the other alternate claims being reserved for the Crown to be disposed of at public auction, or in such

manner as may be decided by the Minister of the Interior.

The penalty for trespassing upon a claim reserved for the Crown shall be immediate cancellation by the Gold Commissioner of any entry or entries which the person trespassing may have obtained, whether by original entry or purchase, for a mining claim, and the refusal by the Gold Commissioner of the acceptance of any application which the person trespassing may at any time make for a claim. In addition to such penalty, the Mounted Police, upon a requisition from the Gold Commissioner to that effect, shall take the necessary steps to eject the trespasser.

7. In defining the size of claims they shall be measured horizontally, irrespective of inequalities on the surface of the ground.

8. If any person or persons shall discover a new mine and such discovery shall be established to the satisfaction of the Gold Commissioner, a creek and river claim 750 feet in length may be granted.[1]

A new stratum of auriferous earth or gravel situated in a locality where the claims are abandoned shall for this purpose be deemed a new mine, although the same locality shall have been previously worked at a different level.

9. The forms of application for a grant for placer mining and the grant of the same shall be those contained in Forms "H" and "I" in the schedule hereto.

10. A claim shall be recorded with the Gold Commissioner in whose district it is situated within three days after the location thereof if it is located within ten miles of the Commissioner's office. One extra day shall be allowed for making such record for every additional ten miles or fraction thereof.

11. In the event of the absence of the Gold Com-

1 NOTICE.

Department of the Interior,
Ottawa, August 7, 1897.

Clauses 4 and 8 of the regulations governing placer mining on the Yukon River and its tributaries, in the Northwest Territories, are amended by reducing the length of a creek and river claim to 100 feet and the length of a creek and river claim to be granted to the discoverer of a new mine to 200 feet. The fee for a renewal of an entry for a claim has been reduced from $100 to $15.

missioner from his office, entry for a claim may be granted by any person whom he may appoint to perform his duties in his absence.

12. Entry shall not be granted for a claim which has not been staked by the applicant in person in the manner specified in these regulations. An affidavit that the claim was staked out by the applicant shall be embodied in Form "H" of the schedule hereto.

13. An entry fee of $15 shall be charged the first year, and an annual fee of $100.00 for each of the following years. This provision shall apply to locations for which entries have already been granted. (See note p. 343.)

14. A royalty of ten per cent. on the gold mined shall be levied and collected by officers to be appointed for the purpose, provided the amount so mined and taken from a single claim does not exceed five hundred dollars per week. In case the amount mined and taken from any single claim exceeds five hundred dollars per week, there shall be levied and collected a royalty of ten per cent. upon the amount so taken out up to five hundred dollars, and upon the excess, or amount taken from any single claim over five hundred dollars per week, there shall be levied and collected a royalty of twenty per cent., such royalty to form part of the Consolidated Revenue, and to be accounted for by the officers who collect the same in due course. The time and manner in which such royalty shall be collected and the persons who shall collect the same, shall be provided for by regulations to be made by the Gold Commissioner.

Default in payment of such royalty, if continued for ten days after notice has been posted upon the claim in respect of which it is demanded, or in the vicinity of such claim, by the Gold Commissioner or his agent, shall be followed by cancellation of the claim. Any attempt to defraud the Crown by withholding any part of the revenue thus provided for, by making false statements of the amount taken out, shall be punished by cancellation of the claim in respect of which fraud or false statements have been committed or made. In respect of the facts as to such fraud or false statements or non-payment of royalty, the decision of the Gold Commissioner shall be final.

15. After the recording of a claim the removal of

any post by the holder thereof or by any person acting in his behalf for the purpose of changing the boundaries of his claim shall act as a forfeiture of the claim.

16. The entry of every holder of a grant for placer mining must be renewed and his receipt relinquished and replaced every year, the entry fee being paid each time.

17. No miner shall receive a grant of more than one mining claim in the same locality, but the same miner may hold any number of claims by purchase, and any number of miners may unite to work their claims in common upon such terms as they may arrange, provided such agreement be registered with the Gold Commissioner and a fee of five dollars paid for each registration.

18. Any miner or miners may sell, mortgage, or dispose of his or their claims, provided such disposal be registered with, and a fee of two dollars paid to the Gold Commissioner, who shall thereupon give the assignee a certificate in Form "J" in the schedule hereto.

19. Every miner shall, during the continuance of his grant, have the exclusive right of entry upon his own claim, for the miner-like working thereof, and the construction of a residence thereon, and shall be entitled exclusively to all the proceeds realized therefrom, upon which, however, the royalty prescribed by clause 14 of these Regulations shall be payable; but he shall have no surface rights therein; and the Gold Commissioner may grant to the holders of adjacent claims such right of entry thereon as may be absolutely necessary for the working of their claims, upon such terms as may to him seem reasonable. He may also grant permits to miners to cut timber thereon for their own use, upon payment of the dues prescribed by the regulations in that behalf.

20. Every miner shall be entitled to the use of so much of the water naturally flowing through or past his claim, and not already lawfully appropriated, as shall, in the opinion of the Gold Commissioner be necessary for the due working thereof; and shall be entitled to drain his own claim free of charge.

21. A claim shall be deemed to be abandoned and open to occupation and entry by any person when the

same shall have remained unworked on working days by the grantee thereof or by some person on his behalf for the space of seventy-two hours,[1] unless sickness or other reasonable cause be shown to the satisfaction of the Gold Commissioner or unless the grantee is absent on leave given by the Commissioner, and the Gold Commissioner, upon obtaining evidence satisfactory to himself that this provision is not being complied with, may cancel the entry given for a claim.

22. If the land upon which a claim has been located is not the property of the Crown it will be necessary for the person who applied for entry to furnish proof that he has acquired from the owner of the land the surface rights before entry can be granted.

23. If the occupier of the land has not received a patent therefor, the purchase money of the surface rights must be paid to the Crown, and a patent of the surface rights will issue to the party who acquired the mining rights. The money so collected will either be refunded to the occupier of the land, when he is entitled to a patent therefor, or will be credited to him on account of payment for land.

24. When the party obtaining the mining rights to lands can not make an arrangement with the owner or his agent or the occupant thereof for the acquisition of the surface rights, it shall be lawful for him to give notice to the owner or his agent or the occupier to appoint an arbitrator to act with another arbitrator named by him, in order to award the amount of compensation to which the owner or occupant shall be entitled. The notice mentioned in this section shall be according to a form to be obtained upon application from the Gold Commissioner for the district in which the lands in question lie, and shall, when practicable, be personally served on such owner, or his agent, if known, or occupant; and after reasonable efforts have been made to effect personal service, without success, then such notice shall be served by leaving it at, or sending by registered letter to, the last place of abode of the owner, agent or occupant. Such notice shall be served upon the owner, or agent within a period to be fixed by the Gold Commissioner before the expiration of the time limited in such notice. If the proprietor

1 72 hours means 3 consecutive days of 24 hours each.

refuses or declines to appoint an arbitrator, or when, for any other reason, no arbitrator is appointed by the proprietor in the time limited therefor in the notice provided for by this section, the Gold Commissioner for the district in which the lands in question lie, shall, on being satisfied by affidavit that such notice has come to the knowledge of such owner, agent or occupant, or that such owner, agent or occupant wilfully evades the service of such notice, or can not be found, and that reasonable efforts have been made to effect such service, and that the notice was left at the last place of abode of such owner, agent or occupant, appoint an arbitrator on his behalf.

25. (a) All the arbitrators appointed under the authority of these regulations shall be sworn before a Justice of the Peace to the impartial discharge of the duties assigned to them, and they shall forthwith proceed to estimate the reasonable damages which the owner or occupants of such lands, according to their several interests therein, shall sustain by reason of such prospecting and mining operations.

(b) In estimating such damages the arbitrators shall determine the value of the land irrespectively of any enhancement thereof from the existence of minerals therein.

(c) In case such arbitrators can not agree, they may select a third arbitrator, and when the two arbitrators can not agree upon a third arbitrator, the Gold Commissioner for the district in which the lands in question lie shall select such third arbitrator.

(d) The award of any two such arbitrators made in writing shall be final, and shall be filed with the Gold Commissioner for the district in which the lands lie.

If any cases arise for which no provision is made in these regulations, the provisions of the regulations governing the disposal of mineral lands other than coal lands, approved by His Excellency the Governor in Council on the 9th of November, 1889, shall apply.

FORM H.

APPLICATION FOR GRANT FOR PLACER MINING AND AFFIDAVIT OF APPLICANT.

I (or we), ..., of ....., hereby apply, under the Dominion Mining Regulations, for a grant of a claim for placer mining as defined in the said Regulations in (here describe locality) and I (or we) solemnly swear:

1. That I (or we) have discovered therein a deposit of (here name the metal or mineral).

2. That I (or we) am (or are) to the best of my (or our) knowledge and belief, the first discoverer (or discoverers) of the said deposit; or:

3. That the said claim was previously granted to (here name the last grantee), but has remained unworked by the said grantee for not less than .....

4. That I (or we) am (or are) unaware that the land is other than vacant Dominion land.

5. That I (or we) did, on the ..... day of ....., mark out on the ground, in accordance in every particular with the provisions of the mining regulations, for the Yukon River and its tributaries, the claim for which I (or we) make this application, and that in so doing I (or we) did not encroach on any other claim or mining location previously laid out by any other person.

6. That the said claim contains, as nearly as I (or we) could measure or estimate, an area of ..... square feet, and that the description (and sketch, if any) of this date hereto attached, signed by me (or us), sets (or set) forth in detail, to the best of my (or our) knowledge and ability, its position, form and dimensions.

7. That I (or we) make this application in good faith, to acquire the claim for the sole purpose of mining, to be prosecuted by myself (or us) or by myself and associates, or by my (or our) assigns.

Sworn before me at ....., this ..... day of ....., 18..

(Signature.) ....

FORM I.

GRANT FOR PLACER MINING.

No. ..... Department of the Interior,
Agency, ..., 18....

In consideration of the payment of the fee prescribed by clause 13 of the Mining Regulations for the Yukon River and its tributaries, by ...., of ....., accompanying his (or their) application No. ....., dated ....., 18...., for a mining claim in (here insert description of locality).

The Minister of the Interior hereby grants to the said ...., for the term of one year from the date hereof, the exclusive right of entry upon the claim (here describe in detail the claim granted) for the miner-like working thereof and the construction of a residence thereon, and the exclusive right to all the proceeds realized therefrom, upon which, however, the royalty prescribed by clause 14 of the Regulations shall be paid.

The said .... shall be entitled to the use of so much of the water naturally flowing through or past his (or their) claim, and not already lawfully appropriated, as shall be necessary for the due working thereof, and to drain his (or their) claim, free of charge.

This grant does not convey to the said .... any surface rights in the said claim, or any right of ownership in the soil covered by the said claim; and the said grant shall lapse and be forfeited unless the claim is continuously and in good faith worked by the said .... or his (or their) associates.

The rights hereby granted are those laid down in the aforesaid mining regulations, and no more, and are subject to all the provisions of the said regulations, whether the same are expressed herein or not.

....
Gold Commissioner.

FORM J.

CERTIFICATE OF THE ASSIGNMENT OF A PLACER MINING CLAIM.

No. ..... Department of the Interior,
Agency, ..., 18..

This is to certify that ...., of ....., has (or have) filed an assignment in due form dated ....., 18...., and accompanied by a registration fee of two dollars, of the grant to ...., of ....., of the right to mine in (insert description of claim) for one year from the ....., 18....

This certificate entitles the said .... to all the rights and privileges of the said .... in respect of the claim assigned, that is to say, to the exclusive right of entry upon the said claim for the miner-like working thereof and the construction of a residence thereon, and the exclusive right to all the proceeds realized therefrom (upon which, however, the royalty prescribed by clause 14 of the Regulations shall be paid) for the remaining portion of the year for which the said claim was granted, to the said ...., that is to say, until the ..... day of ....., 18....

The said .... shall be entitled to the use of so much of the water naturally flowing through or past his (or their) claim and not already lawfully appropriated, as shall be necessary for the due working thereof, and to drain the claim free of charge.

This grant does not convey to the said .... any surface rights in the said claim, or any right of ownership in the soil covered by the said claim; and the said grant shall lapse and be forfeited unless the claim is continuously, and in good faith, worked by the said .... or his (or their) associates.

The rights hereby granted are those laid down in the Dominion Mining Regulations, and no more, and are subject to all the provisions of the said regulations, whether the same are expressed herein or not.

....,
Gold Commissioner.

N. B.—The provisions of these Regulations are lia-

ble to be changed at any time. Copies of the latest Regulations may be obtained by applying to the Department of the Interior, Ottawa, Ontario; or to the Gold Commissioner at Cudahy, Yukon District, Northwest Territories.

REGULATIONS GOVERNING PLACER MINING IN THE PROVISIONAL DISTRICT OF YUKON, NORTHWEST TERRITORIES.

(Approved by order in Council of January 18, 1898.)

INTERPRETATION.

"Free miner" shall mean a male or female over the age of 18, but not under that age, or joint-stock company, named in, and lawfully possessed of, a valid existing free miner's certificate, and no other.

"Legal post" shall mean a stake standing not less than 4 feet above the ground and flatted on two sides for at least 1 foot from the top. Both sides so flatted shall measure at least 4 inches across the face. It shall also mean any stump or tree cut off and flatted or faced to the above height and size.

"Close season" shall mean the period of the year during which placer mining is generally suspended; the period to be fixed by the mining recorder in whose district the claim is situated.

"Mineral" shall include all minerals whatsoever, other than coal.

"Joint-stock company" shall mean any company incorporated for mining purposes under a Canadian charter or licensed by the Government of Canada.

"Mining recorder" shall mean the official appointed by the Gold Commissioner to record applications and grant entries for claims in the mining divisions into which the Commissioner may divide the Yukon District.

FREE MINERS AND THEIR PRIVILEGES.

1. Every person over, but not under, 18 years of

age, and every joint-stock company, shall be entitled to all the rights and privileges of a free miner under these regulations and under the regulations governing quartz mining, and shall be considered a free miner upon taking out a free miner's certificate. A free miner's certificate issued to a joint-stock company shall be issued in its corporate name. A free miner's certificate shall not be transferable.

2. A free miner's certificate may be granted for one year, to run from the date thereof or from the expiration of the applicant's then existing certificate, upon the payment therefor of the sum of $10, unless the certificate is to be issued in favor of a joint-stock company, in which case the fee shall be $50 for a company having a nominal capital of $100,000 or less, and for a company having a nominal capital exceeding $100,000 the fee shall be $100. Only one person or joint-stock company shall be named in a certificate.

3. A free miner's certificate shall be on the following form:

DOMINION OF CANADA.

FREE MINER'S CERTIFICATE.

(Nontransferable.)

Date ..... No. .....

Valid for one year only.

This is to certify that ...., of ....., has paid me this day the sum of ..... and is entitled to all the rights and privileges of a free miner, under any mining regulations of the Government of Canada, for one year from the ..... day of ....., 189..

This certificate shall also grant to the holder thereof the privilege of fishing and shooting, subject to the provisions of any act which has been passed or which may hereafter be passed for the protection of game and fish; also, the privilege of cutting timber for actual necessities, for building houses, boats, and for general mining operations; such timber, however, to be for the exclusive use of the miner himself, but such permission shall not extend to timber which may have been heretofore or which may

hereafter be granted to other persons or corporations.

4. Free miners' certificates may be obtained by applicants in person at the Department of the Interior, Ottawa, or from the agents of Dominion lands at Winnipeg, Manitoba; Calgary, Edmonton, Prince Albert, in the Northwest Territories; Kamloops and New Westminster, in the Province of British Columbia; at Dawson City, in the Yukon District; also from agents of the Government at Vancouver and Victoria, British Columbia, and at other places which may from time to time be named by the Minister of the Interior.

5. If any person or joint-stock company shall apply for a free miner's certificate at the agent's office during his absence, and shall leave the fee required by these regulations with the officer or other person in charge of said office, he or it shall be entitled to have such certificate from the date of such application; and any free miner shall at any time be entitled to obtain a free miner's certificate, commencing to run from the expiration of his then existing free miner's certificate, provided that when he applies for such certificate he shall produce to the agent, or in case of his absence shall leave with the officer or other person in charge of the agent's office, such existing certificate.

6. If any free miner's certificate be accidentally destroyed or lost, the owner thereof may, on payment of a fee of $2, have a true copy of it, signed by the agent or other person by whom or out of whose office the original was issued. Every such copy shall be marked "Substituted certificate;" and unless some material irregularity be shown in respect thereof, every original or substituted free miner's certificate shall be evidence of all matters therein contained.

7. No person or joint-stock company will be recognized as having any right or interest in or to any placer claim, quartz claim, mining lease, bedrock flume grant, or any minerals in any ground comprised therein, or in or to any water right, mining ditch, drain, tunnel, or flume, unless he or it and every person in his or its employment shall have a free miner's certificate unexpired. And on the ex-

piration of a free miner's certificate the owner thereof shall absolutely forfeit all his rights and interest in or to any placer claim, mining lease, bedrock flume grant, and any minerals in any ground comprised therein, and in or to any and every water right, mining ditch, drain, tunnel, or flume, which may be held or claimed by such owner of such expired free miner's certificate, unless such owner shall, on or before the day following the expiration of such certificate, obtain a new free miner's certificate; provided, nevertheless, that should any co-owner fail to keep up his free miner's certificate, such failure shall not cause a forfeiture or act as an abandonment of the claim, but the interest of the co-owner who shall fail to keep up his free miner's certificate shall, ipso facto, be and become vested in his co-owners, pro rata, according to their former interests; provided, nevertheless, that a shareholder in a joint-stock company need not be a free miner, and, though not a free miner, shall be entitled to buy, sell, hold, or dispose of any shares therein.

8. Every free miner shall, during the continuance of his certificate, but not longer, have the right to enter, locate, prospect, and mine for gold and other minerals upon any lands in the Yukon District, whether vested in the Crown or otherwise, except upon Government reservations for town sites, land which is occupied by any building, and any land falling within the curtilage of any dwelling house, and any land lawfully occupied for placer mining purposes, and also Indian reservations.

9. Previous to any entry being made upon lands lawfully occupied, such free miner shall give adequate security, to the satisfaction of the mining recorder, for any loss or damage which may be caused by such entry; and after such entry he shall make full compensation to the occupant or owner of such lands for any loss or damage which may be caused by reason of such entry; such compensation, in case of dispute, to be determined by a court having jurisdiction in mining disputes, with or without a jury.

NATURE AND SIZE OF CLAIMS.

10. A creek or gulch claim shall be 250 feet long, measured in the general direction of the creek or

gulch The boundaries of the claim which run in the general direction of the creek or gulch shall be lines along bed or rim rock 3 feet higher than the rim or edge of the creek, or the lowest general level of the gulch within the claim, so drawn or marked as to be at every point 3 feet above the rim or edge of the creek or the lowest general level of the gulch, opposite to it at right angles to the general direction of the claim for its length; but such boundaries shall not in any case exceed 1,000 feet on each side of the center of the stream or gulch. (See Diagram No. 1.)

11. If the boundaries be less than 100 feet apart horizontally, they shall be lines traced along bed or rim rock 100 feet apart horizontally, following as nearly as practicable the direction of the valley for the length of the claim. (See Diagram No. 2.)

12. A river claim shall be situated only on one side of the river and shall not exceed 250 feet in length, measured in the general direction of the river. The other boundary of the claim, which runs in the general direction of the river, shall be lines along bed or rim rock 3 feet higher than the rim or edge of the river within the claim, so drawn or marked as to be at every point 3 feet above the rim or edge of the river opposite to it, at right angles to the general direction of the claim for its length; but such boundaries shall not in any case be less than 250 feet or exceed a distance of 1,000 feet from low watermark of the river. (See Diagram No. 3.)

13. A "hill claim" shall not exceed 250 feet in length, drawn parallel to the main direction of the stream or ravine on which it fronts. Parallel lines drawn from each end of the base line at right angles thereto, and running to the summit of the hill (provided the distance does not exceed 1,000 feet), shall constitute the end boundaries of the claim.

14. All other placer claims shall be 250 feet square.

15. Every placer claim shall be as nearly as possible rectangular in form, and marked by two legal posts firmly fixed in the ground in the manner shown in Diagram No. 4. The line between the two posts shall be well cut out, so that one post may, if the nature of the surface will permit, be seen from the other. The flatted side of each post shall face the

claim, and on each post shall be written on the side facing the claim a legible notice, stating the name or number of the claim, or both, if possible; its length in feet, the date when staked, and the full Christian and surname of the locator.

16. Every alternate ten claims shall be reserved for the Government of Canada. That is to say, when a claim is located, the discoverer's claim and nine additional claims adjoining each other and numbered consecutively will be open for registration; then the next ten claims of 250 feet each will be reserved for the Government, and so on. The alternate group of claims reserved for the Crown shall be disposed of in such manner as may be decided by the Minister of the Interior.

17. The penalty for trespassing upon a claim reserved for the Crown shall be immediate cancellation by the mining recorder of any entry or entries which the person trespassing may have obtained, whether by original entry or purchase, for a mining claim, and the refusal by the mining recorder of the acceptance of any application which the person trespassing may at any time make for a claim. In addition to such penalty, the mounted police, upon a requisition from the mining recorder to that effect, shall take the necessary steps to eject the trespasser.

18. In defining the size of claims, they shall be measured horizontally, irrespective of inequalities on the surface of the ground.

19. If any free miner or party of free miners discover a new mine, and such discovery shall be established to the satisfaction of the mining recorder—creek, river, or hill—claims of the following size shall be allowed, namely:

To one discoverer, one claim, 500 feet in length.

To a party of two discoverers, two claims, amounting together to 1,000 feet in length.

To each member of a party beyond two in number, a claim of the ordinary size only.

20. A new stratum of auriferous earth or gravel situated in a locality where the claims have been abandoned shall for this purpose be deemed a new mine, although the same locality shall have been previously worked at a different level.

21. The forms of application for a grant for placer

mining, and the grant of the same, shall be those contained in Forms "H" and "I" in the schedule hereto.

22. A claim shall be recorded with the mining recorder in whose district it is situated within ten days after the location thereof, if it is located within ten miles of the mining recorder's office. One extra day shall be allowed for every additional 10 miles or fraction thereof.

23. In the event of the claim being more than 100 miles from a recorder's office, and situated where other claims are being located, the free miners, not less than five in number, are authorized to meet and appoint one of their number a "free miners' recorder," who shall act in that capacity until a mining recorder is appointed by the Gold Commissioner.

24. The "free miners' recorder" shall, at the earliest possible date after his appointment, notify the nearest Government mining recorder thereof, and upon the arrival of the Government mining recorder, he shall deliver to him his records and the fees received for recording the claims. The Government mining recorder shall then grant to each free miner whose name appears in the records an entry for his claim on Form "I" of these regulations, provided an application has been made by him in accordance with Form "H" thereof; the entry to date from the time the "free miners' recorder" recorded the application.

25. If the "free miners' recorder" fails within three months to notify the nearest Government mining recorder of his appointment, the claims which he may have recorded will be canceled.

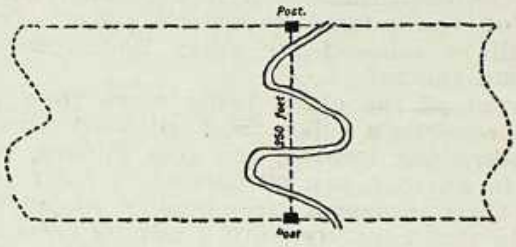
26. During the absence of the mining recorder from his office, the entry for a claim may be granted by any person whom he may appoint to perform his duties in his absence.

27. Entry shall not be granted for a claim which has not been staked by the applicant in person in the manner specified in these regulations. An affidavit that the claim was staked out by the applicant shall be embodied in Form "H" in the schedule hereto.

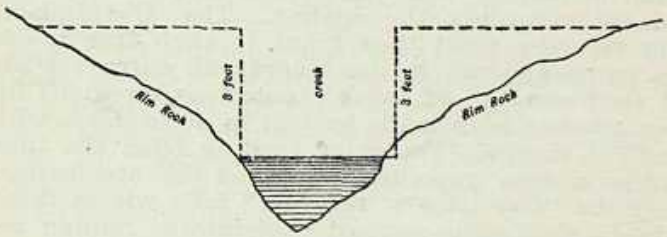
28. An entry fee of $15 shall be charged the first year, and an annual fee of $15 for each of the follow-

DIAGRAM No. 1.

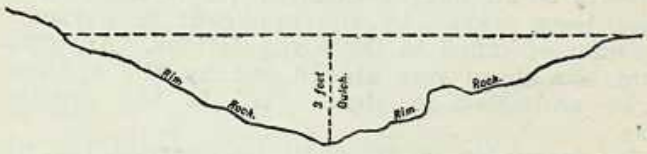
PLAN OF CREEK OR GULCH CLAIM.



SECTIONAL PLAN OF A CREEK CLAIM.



SECTIONAL PLAN OF A GULCH CLAIM.



ing years. This provision shall apply to claims for which entries have already been granted.

29. A statement of the entries granted and fees collected shall be rendered by the mining recorder to the gold commissioner at least every three months, which shall be accompanied by the amount collected.

DIAGRAM No. 2.

PLAN SHOWING SIDE BOUNDARIES LESS THAN 100 FEET APART

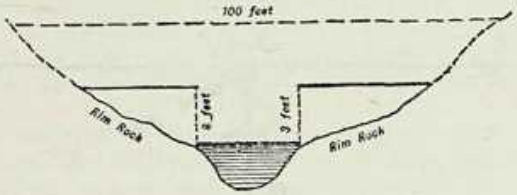
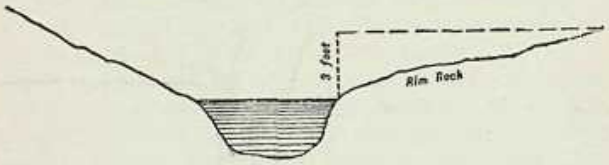


DIAGRAM No. 3.

SECTIONAL PLAN OF A RIVER CLAIM.



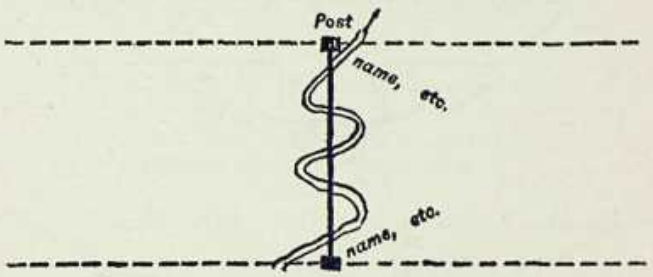
30. A royalty of 10 per cent. on the gold mined shall be levied and collected on the gross output of each claim. The royalty may be paid at banking offices to be established under the auspices of the Government of Canada, or to the Gold Commissioner, or to any mining recorder authorized by him. The sum of $2,500 shall be deducted from the gross annual output of a claim when estimating the amount upon which royalty is to be calculated; but this exemption shall not be allowed unless the royalty is paid at a banking office or to the Gold Commissioner or mining recorder. When the royalty is paid monthly or at

longer periods, the deduction shall be made ratable on the basis of $2,500 per annum for the claim. If not paid to the bank, Gold Commissioner, or mining recorder, it shall be collected by the customs officials or police officers when the miner passes the posts established at the boundary of a district; such royal-

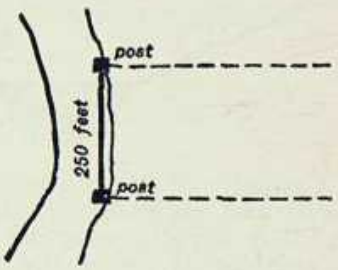
DIAGRAM No. 4.

SHOWING HOW CLAIMS ARE TO BE STAKED.

PLAN OF A CREEK OR GULCH CLAIM.



PLAN OF A RIVER CLAIM



ty to form part of the consolidated revenue, and to be accounted for by the officers who collect the same in due course. The time and manner in which such royalty shall be collected shall be provided for by regulations to be made by the Gold Commissioner.

31. Default in payment of such royalty, if continued for ten days after notice has been posted on

the claim in respect of which it is demanded, or in the vicinity of such claim, by the Gold Commissioner or his agent, shall be followed by cancellation of the claim. Any attempt to defraud the Crown by withholding any part of the revenue thus provided for, by making false statements of the amount taken out, shall be punished by cancellation of the claim in respect of which fraud or false statements have been committed or made. In respect to the facts as to such fraud or false statements or non-payment of royalty, the decision of the Gold Commissioner shall be final.

32. After the recording of a claim, the removal of any post by the holder thereof, or by any person acting in his behalf, for the purpose of changing the boundaries of his claim, shall act as a forfeiture of the claim.

33. The entry of every holder of a grant for placer mining must be renewed and his receipt relinquished and replaced every year, the entry fee being paid each time.

34. The holder of a creek, gulch, or river claim may, within sixty days after staking out the claim, obtain an entry for a hill claim adjoining it by paying to the mining recorder the sum of $100. This permission shall also be given to the holder of a creek, gulch, or river claim obtained under former regulations, provided that the hill claim is available at the time an application is made therefor.

35. No miner shall receive a grant of more than one mining claim in a mining district, the boundaries of which shall be defined by the mining recorder, but the same miner may also hold a hill claim, acquired by him under these regulations in connection with a creek, gulch, or river claim, and any number of claims by purchase; and any number of miners may unite to work their claims in common, upon such terms as they may arrange, provided such agreement is registered with the mining recorder and a fee of $5 paid for each registration.

36. Any free miner or miners may sell, mortgage, or dispose of his or their claims, provided such disposal be registered with, and a fee of $2 paid to, the mining recorder, who shall thereupon give the as-

signee a certificate in the Form "J" in the schedule hereto.

37. Every free miner shall, during the continuance of his grant, have the exclusive right of entry upon his own claim for the miner-like working thereof, and the construction of a residence thereon, and shall be entitled exclusively to all the proceeds realized therefrom, upon which, however, the royalty prescribed by these regulations shall be payable; provided that the mining recorder may grant to the holders of other claims such right of entry thereon as may be absolutely necessary for the working of their claims upon such terms as may to him seem reasonable. He may also grant permits to miners to cut timber thereon for their own use.

38. Every free miner shall be entitled to the use of so much of the water naturally flowing through or past his claim, and not already lawfully appropriated, as shall, in the opinion of the mining recorder, be necessary for the due working thereof, and shall be entitled to drain his own claim free of charge.

39. A claim shall be deemed to be abandoned and open to occupation and entry by any person when the same shall have remained unworked on working days, excepting during the close season, by the grantee thereof or by some person on his behalf for the space of[1] seventy-two hours, unless sickness or other reasonable cause be shown to the satisfaction of the mining recorder, or unless the grantee is absent on leave given by the mining recorder, and the mining recorder, upon obtaining evidence satisfactory to himself that this provision is not being complied with, may cancel the entry given for a claim.

40. If any cases arise for which no provision is made in these regulations, the provisions of the regulations governing the disposal of mineral lands other than coal lands, approved by his excellency the governor in council on the 9th of November, 1889, or such other regulations as may be substituted therefor, shall apply.

1 72 hours means 3 consecutive days of 24 hours each.

FORM H.—APPLICATION FOR GRANT FOR PLACER MINING, AND AFFIDAVIT OF APPLICANT.

I (or we) ...., of ....., hereby apply, under the Yukon placer-mining regulations, for a grant of a claim for placer mining, as defined in the said regulations, in (here describe locality), and I (or we) solemnly swear:

1. That from indications I (or we) have observed on the claim applied for, I (or we) have reason to believe that there is therein a deposit of gold.

2. That I (or we) am (or are) to the best of my (or our) knowledge and belief the first to observe such indications, or:

3. That the said claim was previously granted to (here name the last grantee), but has remained unworked by the said grantee for not less than .....

4. That I (or we) am (or are) unaware that the land is other than vacant Dominion lands.

5. That I (or we) did on the ..... day of ..... mark out on the ground, in accordance in every particular with the provisions of the mining regulations for the Yukon District, the claim for which I (or we) make this application, and in so doing I (or we) did not encroach on any other claim or mining location previously laid out by any other person.

6. That the length of the said claim, as nearly as I (or we) could measure, is .....feet, and that the description of this date hereto attached, signed by me (or us), sets (or set) forth in detail, to the best of my (or our) knowledge and ability, its position.

7. That I (or we) make this application in good faith, to acquire the claim for the sole purpose of mining to be prosecuted by myself (or us) or by myself and associates, or by my (or our) assigns.

Sworn before me at ..... this
..... day of ....., 18....

(Signature.)

FORM I.—GRANT FOR PLACER MINING.

No. ..... Department of the Interior,
Agency ....., 18....

In consideration of the payment of the fee of $15 prescribed by clause 28 of the mining regulations for

the Yukon District, by (A. B.) of ....., accompanying his (or their) application No. ....., dated ....., 18...., for a mining claim in (here insert description of locality).

The Minister of Interior hereby grants to the said (A. B.) for the term of one year from the date hereof, the exclusive right of entry upon the claim (here describe in detail the claim granted) for the miner-like working thereof, and the construction of a residence thereon, and the exclusive right to all the proceeds realized therefrom, upon which, however, the royalty prescribed by the regulations shall be paid.

The said (A. B.) shall be entitled to the use of so much of the water naturally flowing through or past his (or their) claim, and not already lawfully appropriated, as shall be necessary for the due working thereof, and to drain his (or their) claim, free of charge.

This grant does not convey to the said (A. B.) any right of ownership in the soil covered by the said claim, and the said grant shall lapse and be forfeited unless the claim is continuously and in good faith worked by the said (A. B.) or his (or their) associates.

The rights hereby granted are those laid down in the aforesaid mining regulations, and no more, and are subject to all the provisions of the said regulations, whether the same are expressed herein or not.

....,
Mining Recorder.

FORM J.—CERTIFICATE OF THE ASSIGNMENT OF A PLACER-MINING CLAIM.

No. .....

Department of the Interior,
Agency ....., 18....

This is to certify that (B. C.), of ....., has (or have) filed an assignment in due form dated ....., 18...., and accompanied by a registration fee of $2, of the grant to (A. B.), of ....., of the right to mine in (here insert description of claim) for one year from the ....., 18....

This certificate entitles the said (B. C.) to all the

rights and privileges of the said (A. B.) in respect to the claim assigned; that is to say, to the exclusive right of entry upon the said claim for the miner-like working thereof and the construction of a residence thereon, and the exclusive right to all the proceeds realized therefrom (upon which, however, the royalty prescribed by the regulations shall be paid) for the remaining portion of the year for which the said claim was granted to the said (A. B.); that is to say, until the ..... day ....., 18....

The said (B. C.) shall be entitled to the use of so much of the water naturally flowing through or past his (or their) claim and not already lawfully appropriated as shall be necessary for the due working thereof, and to drain his claim, free of charge.

This grant does not convey to the said (B. C.) any right of ownership in the soil covered by the said claim, and the said grant shall lapse and be forfeited unless the claim is continuously and in good faith worked by the said (B. C.) or his (or their) associates.

The rights hereby granted are those laid down in the Yukon placer-mining regulations, and no more, and are subject to all the provisions of the said regulations, whether the same are expressed herein or not.

....,
Mining Recorder.

REGULATIONS GOVERNING THE ISSUE OF LEASES TO DREDGE FOR MINERALS IN THE BEDS OF RIVERS IN THE PROVISIONAL DISTRICT OF YUKON, NORTHWEST TERRITORIES.

(Approved of by order in Council No. 125, of the 18th of January, 1898.)

The following regulations are adopted for the issue of leases to persons or companies who have obtained a free miner's certificate in accordance with the provisions of the regulations governing placer mining in the provisional district of Yukon, to dredge for minerals other than coal in the submerged beds or bars

of rivers in the provisional district of Yukon, in the Northwest Territories:

1. The lessee shall be given the exclusive right to subaqueous mining and dredging for all minerals with the exception of coal in and along an unbroken extent of 5 miles of a river following its sinuosities, to be measured down the middle thereof, and to be described by the lessee in such manner as to be easily traced on the ground; and although the lessee may also obtain as many as five other leases, each for an unbroken extent of 5 miles of a river, so measured and described, no more than six such leases will be issued in favor of an individual or company, so that the maximum extent of river in and along which any individual or company shall be given the exclusive right above mentioned shall under no circumstances exceed 30 miles. The lease shall provide for the survey of the leasehold under instructions from the surveyor-general, and for the filing of the returns of survey in the Department of the Interior within one year from the date of the lease.

2. The lease shall be for a term of twenty years, at the end of which time all rights vested in, or which may be claimed by, the lessee under his lease are to cease and determine. The lease may be renewable, however, from time to time thereafter in the discretion of the Minister of the Interior.

3. The lessee's right of mining and dredging shall be confined to the submerged beds or bars in the river below low watermark, that boundary to be fixed by its position on the 1st day of August in the year of the date of the lease.

4. The lease shall be subject to the rights of all persons who have received or who may receive entries for claims under the placer-mining regulations.

5. The lessee shall have at least one dredge in operation upon the five miles of river leased to him, within two seasons from the date of his lease, and if, during one season when operations can be carried on, he fails to efficiently work the same to the satisfaction of the Minister of the Interior, the lease shall become null and void unless the Minister of the Interior shall otherwise decide; provided that when any company or individual has obtained more than one lease, one dredge for each 15 miles or portion

thereof shall be held to be compliance with this regulation.

6. The lessee shall pay a rental of $100 per annum for each mile of river so leased to him. The lessee shall also pay to the Crown a royalty of 10 per centum on the output in excess of $15,000, as shown by sworn returns to be furnished monthly by the lessee to the Gold Commissioner during the period that dredging operations are being carried on; such royalty, if any, to be paid with each return.

7. The lessee who is the holder of more than one lease shall be entitled to the exemption as to royalty provided for by the next preceding regulation to the extent of $15,000 for each 5 miles of river for which he is the holder of a lease; but the lessee under one lease shall not be entitled to the exemption as to royalty provided by the next two preceding regulations, where the dredge or dredges used by him have been used in dredging by another lessee, or in any case in respect of more than 30 miles.

8. The lessee shall be permitted to cut, free of all dues, on any land belonging to the Crown, such timber as may be necessary for the purposes of his lease; but such permission shall not extend to timber which may have been heretofore or may hereafter be granted to other persons or corporations.

9. The lessee shall not interfere in any way with the general right of the public to use the river in which he may be permitted to dredge, for navigation and other purposes; the free navigation of the river shall not be impeded by the deposit of tailings in such manner as to form bars or banks in the channel thereof, and the current or stream shall not be obstructed in any material degree by the accumulation of such deposits.

10. The lease shall provide that any person who has received or who may receive entry under the placer mining regulations shall be entitled to run tailings into the river at any point thereon, and to construct all works which may be necessary for properly operating and working his claim; provided that it shall not be lawful for such person to construct a wing dam within 1,000 feet from the place where any dredge is being operated, nor to obstruct

or interfere in any way with the operation of any dredge.

11. The lease shall reserve all roads, ways, bridges, drains and other public works, and all improvements now existing, or which may hereafter be made in, upon, or under any part of the river, and the power to enter and construct the same, and shall provide that the lessee shall not damage nor obstruct any public ways, drains, bridges, works, and improvements now or hereafter to be made upon, in, over, through or under the river; and that he will substantially bridge or cover and protect all the cuts, flumes, ditches, and sluices, and all pits and dangerous places at all points where they may be crossed by a public highway or frequented path or trail, to the satisfaction of the Minister of the Interior.

12. That the lessee, his executors, administrators, or assigns, shall not, nor will, assign, transfer, or sublet the demised premises, or any part thereof, without the consent in writing of the minister first had and obtained.

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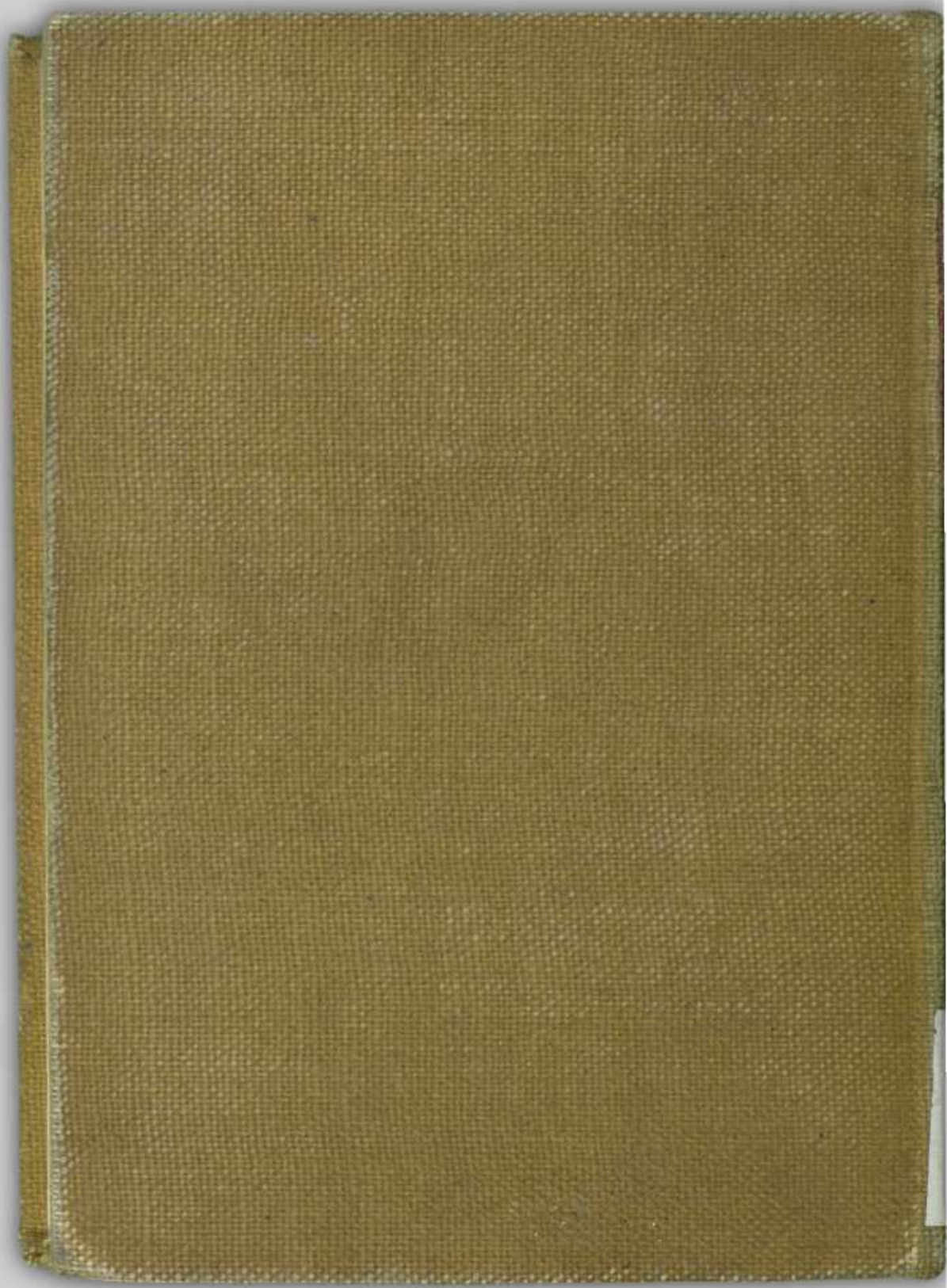

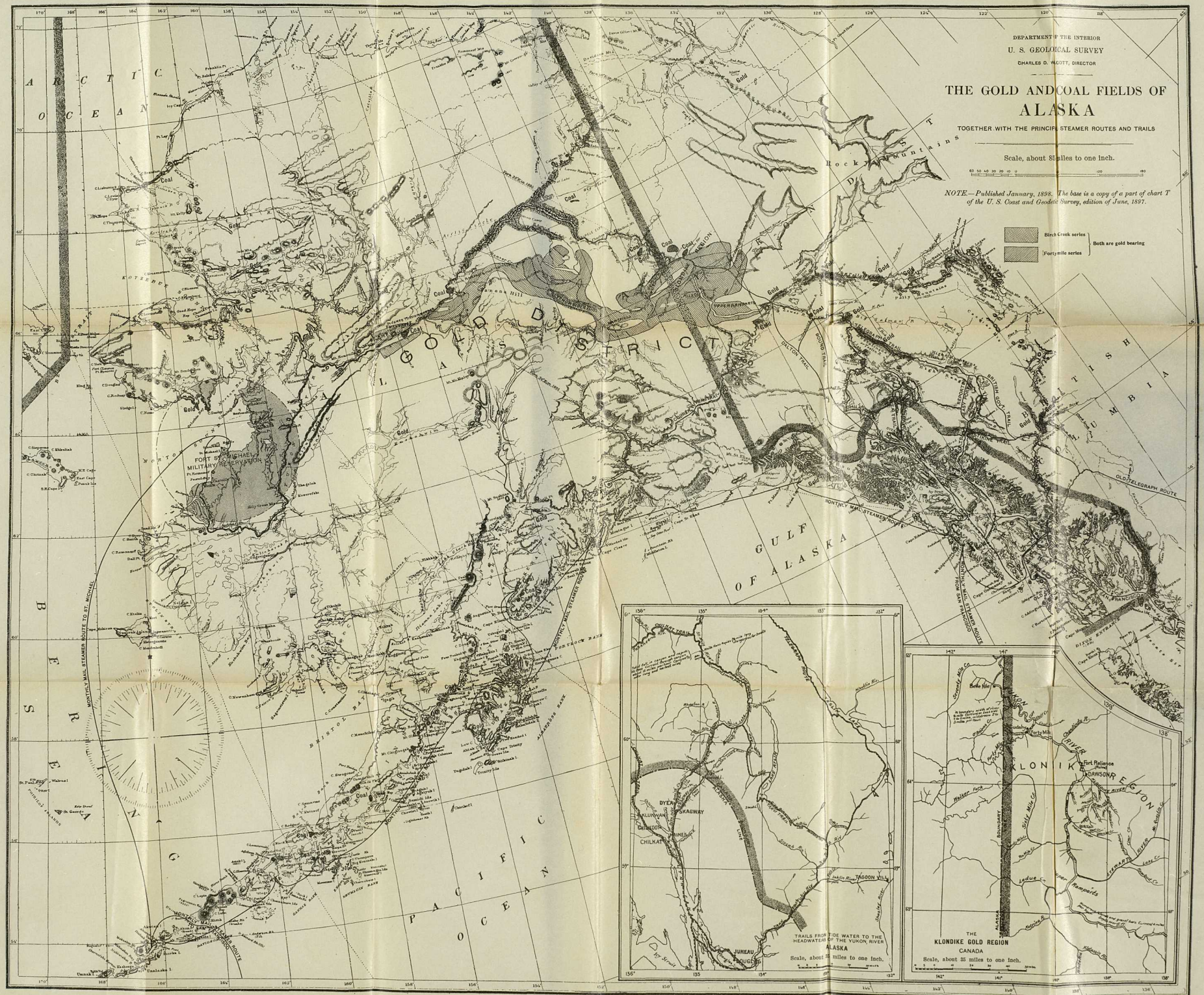
DEPARTMENT OF THE INTERIOR
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CHARLES D. WALCOTT, DIRECTOR
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Scale, about 85 miles to one inch.
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