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TWENTY-FOURTH ANNUAL
REPORT OF THE
MINING INDUSTRY
OF IDAHO
FOR THE YEAR
1922



STEWART CAMPBELL
INSPECTOR OF MINES

MISS A. F. MAHAN
Secretary

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Letter of Transmittal

To His Excellency,

THE HONORABLE D. W. DAVIS,

Governor of Idaho.

SIR :

In compliance with the provisions of section 5480, Idaho Compiled Statutes, I have the honor to transmit herewith the annual report of the inspector of mines for the year ended December 31, 1922.

Respectfully submitted,

STEWART CAMPBELL,

Inspector of Mines.

INTRODUCTION

A large number of mining companies and associations refuse to file with the inspector of mines the reports required by law, and many reports that are filed are not complete and clearly show that the law is either disregarded or that the one making the report is not familiar with the affairs of the company or the requirements of the law. That there may be no question about this and that the inspector's position may be fully understood the laws relative to annual reports are quoted below.

IDAHO LAWS RELATIVE TO REPORTS TO INSPECTOR OF MINES

Sec. 5474, Idaho Comp. Stat. "It is hereby made the duty of the owner, lessor, lessee, agent, manager or other person in charge of each and every mine, of whatever kind or character, within the state, to forward to the inspector of mines at his office, not later than the 1st day of June in each year, a detailed report showing the character of the mine, the number of men then employed and the estimated maximum number of men to be employed therein during the ensuing year, the method of working such mine and the general condition thereof, and such owner, lessor, lessee, agent, manager or other person in charge of any mine within the state, must furnish whatever information relative to such mine as the inspector of mines may, from time to time, require for his guidance in the proper discharge of his official duties."

Sec. 5319, Idaho Comp. Stat. "The term 'actual mining operations,' within the meaning of this and the following sections, includes the development of production of gas or oil." (As amended by Sess. Laws of 1921, chap. 179, p. 375.)

Sec. 5320, Idaho Comp. Stat. "All corporations, domestic or foreign, and associations engaged in mining operations within the state, shall during the month of June each year after the passage and approval of this chapter file with the inspector of mines for the State of Idaho, a report which shall be made under oath and shall contain names of each mining claim and the total number of such claims, owned, leased, or otherwise held, forming the basis for the issue of stock certificates, and the number being worked and developed, and the mining district and county in which such property is located; the nature of the title thereof, or interest therein, whether lease holder or otherwise, the character, value and general description of all

buildings, works, machinery and other improvements; the total amount and description of all development work done by such corporation or association; the total sum of money or other valuable consideration given or paid out therefor; the total number of shares or certificates that such corporation or association is by law authorized to issue, and the different classes and the par value thereof; total number of shares of stock certificates set aside by such corporation or association in its treasury to sell or otherwise dispose of for the purpose of working, developing or otherwise improving the property of such corporation or association; the total number of shares of stock or certificates sold and the total sum of money or other consideration received therefor and the number of shares or certificates remaining unsold. All corporations, domestic or foreign, and associations who are not now engaged in mining operations within this state, who desire to **engage in mining and mining operations within this state**, shall, before engaging in mining and mining operations within this state, make, execute and file such report as is above provided, and such report shall be made and filed by corporations, domestic or foreign, and associations who shall be engaged in mining and mining operations within this state at the time of taking effect of this chapter." (As amended by Sess. Laws of 1921, chap. 123, p. 297).

Sec. 5922, Idaho Comp. Stat. . . . "It shall be unlawful for any corporation or association to refuse, fail or neglect to make, execute, and file the report provided for in section 5320, and upon conviction thereof such corporation or association shall be deemed guilty of a misdemeanor and punished accordingly."

Many inactive mining companies and associations have been failing to file the annual reports as provided by law in sections 5474 and 5320 of the Compiled Statutes. On November 1, 1921, the inspector directed the following inquiry to the attorney general:

"If a mining corporation, domestic or foreign, or an association is holding its organization intact and this organization is holding and controlling mining property in Idaho is such corporation or association engaged in mining operations within the State within the meaning of section 5320, Idaho Compiled Statutes, as amended by chapter 123 of the 1921 Session Laws?"

On November 23, 1921, the attorney general replied:

". . . such corporation or association is engaged in mining operations in this state which come within the provisions of said section. The intent of the legislature seems plain that it meant to require all corporations and associations holding mining claims within the State to make reports."

There has been some controversy as to whether a common law trust company is compelled to comply with the requirements of the Blue Sky law. The decision of the supreme court in the case of *State v. T. B. Cosgrove* (rendered November 6, 1922) settled this question in the affirmative. The Montana Syndicate, a com-

mon law trust company of the State of Montana, sold its units of stock in Idaho without complying with the Blue Sky law. The court held,

"That it is an association within the meaning of said section (5305 as amended Sess. Laws 1921, p. 29) and that the sale of its units was in violation of what is commonly known as the Blue Sky law of this State."

This decision removes all doubt about common law trust companies being required to file reports in the office of the inspector of mines as provided by section 5320, Idaho Comp. Stat., as amended by Sess. Laws 1921, chap. 123, p. 297.

The law and the supreme court decision relative to the filing of annual reports with the inspector of mines by mining companies and associations are clear in their intent, construction and penalties. Failure to file the reports required is a violation of the law and all companies and associations which have defaulted are listed under "*Companies Failing to Report.*"

All companies that have forfeited their corporate charter, and have failed to file their annual report with the inspector of mines have been considered as legally dead; therefore no mention is made of them.

PROSPECTS

The list of prospects contained in this report has been greatly enlarged over that of the twenty-third report. Many of these prospects are worthy of more prominent mention, but as the prospectors failed to submit any facts it is impossible to give further information. If the small mine owner could realize that it would be beneficial to him if he furnished detailed information to the inspector it would greatly assist in displaying the mining possibilities in Idaho, and result in his prospect receiving more attention. The list published in the twenty-third report is the first of its kind ever compiled in Idaho and has proven that the practice is worthy of continuation as it has been a guide to those looking for mines. It was extensively used and in a number of cases resulted in the prospect being examined and a sale made.

The prospectors that submitted reports have been included in the body of this report on the same basis as the reporting mining companies. . . . This policy will be continued in the future.

MINERAL MARKET INFORMATION

The number of requests during 1922 for information on where the uncommon minerals and metals could be sold has proven that the mineral marketing feature added to the office during 1921 is a complete success and is of invaluable assistance in promoting the mining industry of Idaho. The names and addresses of the purchasers and users in the United States of the following minerals and metals have been listed.

Antimony	Fullers earth	Pumice
Asbestos	Graphite	Radium
Barytes	Gypsum	Silica sand
Bauxite	Magnesium	Sodium
Bismuth	Magnesite	Talc
Cadmium	Manganese	Tin
Chromium	Mica	Titanium
Cobalt	Molybdenum	Tripoli
Diatomaceous earth	Monazite	Tungsten
Feldspar	Nickel	Uranium
Fluorspar	Platinum	Vanadium

The purchasers of the various minerals and metals have been separately listed and a list of the particular mineral or metal in which anyone is interested is furnished on request.

NEWSPAPERS AND PERIODICALS

The publishers who gratuitously furnished copies of their papers to the mine inspector's office greatly assisted the inspector in keeping in touch with mine developments and news. This courtesy is appreciated and the State of Idaho through the mine inspector extends its thanks to the following:

The Arco Advertiser.....	Arco
Bonnors Ferry Herald.....	Bonnors Ferry
The Challis Messenger.....	Challis
The Grangeville Globe.....	Grangeville
The Idaho Recorder.....	Salmon
Kellogg-Wardner News.....	Kellogg
The Mackay Miner.....	Mackay
Mining Truth.....	Spokane
The Owyhee Avalanche.....	Silver City
Pend d'Oreille Review.....	Sandpoint
Priest River Times.....	Priest River
Salmon Herald.....	Salmon
The Salt Lake Mining Review.....	Salt Lake City
Times-News-Miner.....	Hailey
The Wallace Miner.....	Wallace
The Weekly Press-Times.....	Wallace

J. G. Fralick, for copies of Spokesman Review.

BIBLIOGRAPHIES

The publications of the U. S. Geological Survey; U. S. Bureau of Mines; the Idaho Bureau of Mines and Geology; the reports of the inspector of mines; and journals dealing with mining and geology contain a large amount of information on the geology, mineralogy and mineral resources of Idaho. These publications constitute a valuable source of information which is not available unless properly indexed. The bibliographies published in the twenty-third annual report have proven so valuable that they have been included in this report in corrected and enlarged form and now constitute the most complete bibliography on the mineral resources of Idaho that has ever been published. Practically all of the publications referred to in the bibliography have been placed in the mine inspector's library and arrangements have been made so that copies of those not on file can be procured when desired.

ABBREVIATIONS USED IN BIBLIOGRAPHIES

Am. Geology	American Geology
Am. Jour. Sci.	American Journal of Science
Am. Mineralogist	American Mineralogist
California Jour. Tech.	California Journal of Technology
Canada Geol. Survey Ann. Rept.	Canada Geological Survey Annual Report
Colorado Sci. Soc. Proc.	Colorado Scientific Society Proceedings
Columbia School of Mines Quart.	Columbia School of Mines Quarterly
Econ. Geology	Economic Geology
Eng. and Min. Jour.	Engineering and Mining Journal
Franklin Inst. Jour.	Franklin Institute Journal
Geol. Soc. America	Geological Society of America
Jour. Canadian Min. Inst.	Journal of Canadian Mining Institute
Min. and Eng. World	Mining and Engineering World
Min. and Sci. Press	Mining and Scientific Press
Min. Reporter	Mining Reporter
Min. World	Mining World
Nat. Geog. Mag.	National Geographic Magazine
No.	Number
p, pp.	page, pages
pt.	part
Proc. Int. Min. Cong.	Proceedings International Mining Congress
Salt Lake Min. Review	Salt Lake Mining Review
Sci. Am. Suppl.	Scientific American Supplement
ser.	series
sess.	session
Trans. Am. Inst. Min. Eng.	Transactions American Institute of Mining Engineers
Trans. New York Acad. Sci.	Transactions New York Academy of Science
U. S. Bureau of Mines Bull.	U. S. Bureau of Mines Bulletin
U. S. Geol. and Geog. Survey	U. S. Geological and Geographical Survey
U. S. Geol. Survey Ann. Rept.	U. S. Geological Survey Annual Report
U. S. Geol. Survey Bull.	U. S. Geological Survey Bulletin
U. S. Geol. Survey Geol. Atlas	U. S. Geological Survey Geologic Atlas
U. S. Geol. Survey Mon.	U. S. Geological Survey Monograph
U. S. Geol. Survey Prof. Paper	U. S. Geological Survey Professional Paper
Univ. of Idaho	University of Idaho
vol.	volume
Washington Acad. Sci. Jour.	Washington Academy of Science Journal

LIBRARY

The library, which the present incumbent installed during 1921, has been greatly enlarged until at the present time it is one of the most complete mining libraries in the western United States. It now contains practically every publication of the U. S. Geological Survey and U. S. Bureau of Mines as well as the U. S. Mint reports. Numerous volumes published by the geological surveys of other states and many volumes of journals dealing with mining and geology are also in the library.

Excepting a few articles published in old issues of the various journals, everything of importance dealing with the mining industry of Idaho, including geology, mineralogy and mineral resources, is contained in this library. Since the location of the library is such that it cannot be used by many people who desire this information, the practice of loaning the books has been established. In other words, it is a traveling library, and the books are let out or mailed to all responsible inquirers on request. This feature and method of handling has proven to be a great assistance in promoting the mining industry of the state through disseminating the information published.

INSPECTION

During the year practically every operating mine in the State was visited and, as almost every county in the State has either an operating mine or prospects worthy of investigation, a large amount of time and travel was necessary. Over 200 mines and prospects were examined; and compliance with safety provisions, general geological conditions, and possibilities were noted. Practically all of the large operators are maintaining "safety first" organizations and doing everything within their power to make their mines as safe as possible for the men. The safety laws and the laws governing the regulation of mines were so well observed throughout the year that but few improvement orders were necessary. All of the operators manifested a spirit of cooperation, and the incumbent was always courteously received while discharging his official duties.

The law requires the inspector to visit every mining county in the State during each year to inspect the mines for safety and to collect information and statistics relative to mines and mining. These provisions have been complied with during the past biennium, and have resulted in the inspector becoming thoroughly familiar with the mining industry and mining possibilities in the State. Particular attention has been given to small mines and prospects, and to the development of the uncommon minerals, as the future prosperity of the State is greatly dependent upon these.

SCOPE OF MINING INDUSTRY

RETROSPECTIVE

Almost a billion dollars—\$950,000,000 in 62 years; an average of \$15,300,000 a year for the total time or an average of approximately \$24,450,000 a year for the past 20 years—this is the production record of Idaho for the five principal metals; an average annual mine payroll of over \$9,000,000, and a mine tax roll running into the hundreds of thousands of dollars. Surely an industry worthy of consideration when reviewing the resources of Idaho or when studying the causes of the steady, substantial growth that has taken place and is continuing in this great State.

PROSPECTIVE

The mineral wealth of Idaho, which is greatly diversified, consists of practically all of the principal metals used in modern arts and many of the uncommon metals and minerals for which a demand is continually being developed, and gives the State a resource and a basic industry that will add to her prosperity for many generations. The importance and standing of this industry as it is today is but a barometer forecasting the possibilities of the future.

The mine development and plant of the Anaconda Copper Mining Company at Soda Springs constitutes one of the largest industrial installations in Idaho and the largest phosphate rock mine in the United States. Yet, large as it is, it is only as a mere pin prick in the side of an ocean liner when compared with the vast area of phosphate rock in Idaho. This rock is the greatest potential mineral wealth in the State; and estimates by the United States Geological Survey run into billions of tons of available rock; a quantity sufficient to satisfy the demand of the world for generations to come.

The largest lead mines in the world are in Idaho. Conditions are such that one is safe in assuming that others equally as large are yet to be discovered and that many of those under development will become of considerable importance. Lead is a strategic metal. The demand for it is increasing; as well as new uses. No new supply has been discovered in recent years and a future high price is assured. These factors are all a stimulus to the greater expansion of this industry.

Zinc, sister metal of lead, is similarly situated as to distribution, prices and uses, and the expansion of its development will naturally increase with that of lead.

Idaho is an important producer of copper, and the State holds a high position among the ranking states of the Union. The many properties now under development and the numerous discovered and undiscovered veins indicate that this metal will eventually put the State in a higher position and greatly add to its prosperity.

Silver, the second most important metal produced in Idaho, will always keep the State in an enviable position, as this metal is associated with all of the principal metals and its production will increase with the production of the others.

Gold is the most widely distributed rare metal found and produced in the State. Practically all of the placer deposits that could be hydraulicked are exhausted, but large areas suitable for dredging operations are still available and the gold lode deposits in this State offer greater opportunities than those of almost any other State in the Union.

Many of the common and uncommon metals and minerals are being developed, the extensive distribution of which will always be an important factor in and add to the mineral wealth of the State.

RESOURCES

The State of Idaho contains an area of 83,888 square miles. The maximum width at the southern end is approximately 312 miles and the length from the southwest corner to the northwest corner is approximately 486 miles. The State is divided into 44 counties, 36 of which can be classed as having minerals of commercial importance. In 22 of these counties considerable mining has been done, while only 18 have mines of any importance.

In the past practically all mining has been confined to the five principal metals, which are widely distributed throughout the State; but also lying within the borders of the State is a great variety of the uncommon metals and minerals. It is this great diversity of mineral wealth that makes Idaho one of the principal mining states of the Union.

METALS

Lead

Lead, the principal metal produced in Idaho, is widely distributed throughout the State. It occurs in all the lead minerals, the most important of which is galena or lead sulphide. The principal counties, in the order of their prominence, are: Shoshone, Blaine, Lemhi, Custer, Boundary, Bonner, Boise, Butte and Camas. The importance of Idaho as a lead producing State is shown by the fact that in 1922 her production was a little over one-fourth of the total production of the United States, thus giving her second place; Missouri being first.

Silver

All of the lead, copper, and zinc ores of the State carry a large proportion of silver, so the mining of silver can hardly be separated from that of its associated metals, and naturally its production fluctuates with their production. During 1922 Idaho ranked third in the United States in the production of silver; Utah was first and Montana second. One-seventh of all the silver produced in the United States during 1922 came from Idaho. As stated above silver is associated with all of the lead, zinc and copper ores; and with but one or two exceptions it is not associated with other metals. Its occurrence is such that it is one of the most widely distributed metals produced in the State. The principal silver producing counties are Shoshone, Blaine, Custer, Bonner, Lemhi, Boundary, Washington, Boise, Owyhee, Idaho, Butte, Camas, Valley, Adams and Cassia, named in the order of their prominence.

Copper

Copper, which ranks third in the list of the principal metals produced in Idaho, is found in many widely scattered sections throughout the State. The principal counties that produce this metal, in the order of their importance, are: Custer, Lemhi, Shoshone, Adams, Bonner, Washington, Idaho, Blaine, Butte, Clearwater and Latah. Of these Custer and Lemhi counties produce by far the greater amount, although eventually the large copper deposits of Adams County will make this county one of the largest producers. Practically all of the copper ores carry a large amount of silver and gold, and in some cases the silver content is more valuable than the copper.

Zinc

In a great many mines zinc occurs associated with lead, although there are a large number of mines whose principal production is this metal. Being associated with lead ores and occurring similarly, it is only found in the same counties as those producing lead and in the same ratio of importance.

Gold

Gold is one of the most widely distributed metals in the State, being found associated with practically all of the lead, zinc, copper and silver ores; as well as being found in all of the placer deposits and the gravel bars of the Snake River. It occurs in practically every county in the State, but the following are the most important: Boise, Idaho, Shoshone, Elmore, Lemhi, Custer, Blaine, Owyhee, Clearwater and Valley.

Antimony

Deposits of antimony, principally the sulphide (stibnite), occur in Shoshone, Valley, Blaine, Idaho and Custer Counties. Those in the Coeur d'Alene district of Shoshone County have been extensively developed; a number of mills for the concentration of the ore have been constructed; and in the past a large tonnage has been shipped. The deposits in Valley County contain such a high grade of ore that most of it can be shipped without treatment. During the war, when antimony commanded a high price, a large tonnage was produced and shipped from these mines. In the other counties mentioned many large deposits worthy of exploitation occur, but they have never been developed.

Bismuth

Bismuth, occurring as a sulphide, has been found in Blaine County unassociated with other metals, as well as in association with some of the lead ores.

Cobalt

Cobalt has been found in Lemhi County. During the war when this metal commanded a high price, this deposit was actively developed; a small mill was constructed; and concentrates carrying a large cobalt content were shipped. Cobalt is also reported as having been found in Kootenai County.

Manganese

Manganese occurs in Washington, Shoshone, Butte and Lemhi counties. Some of the deposits carry a high manganese content and others a high manganese-iron content.

Molybdenum

Molybdenum is found in Boundary, Elmore, Lemhi and Idaho Counties occurring as the sulphide disseminated in intrusive rocks and as a molybdate of lead in fissure veins in limestone.

Monazite

Monazite occurs as a placer sand in the gravels of practically all of the gold placer claims in the State. The quantity varies, and in some of the deposits is not sufficient to be of commercial importance. The deposits of Ada, Idaho, Lemhi and Owyhee Counties contain an appreciable amount of this material, and those of Boise and Clearwater Counties are of commercial importance.

Monazite, a golden colored sand, is a phosphate of the cerium metals, one of which is thorium. The high thorium content of the sand found in Idaho gives it commercial importance. The principal use of thorium is in the manufacture of incandescent mantles for gas lighting.

Nickel

Nickel has been found in Lemhi County, and during the war considerable development work was done on the property in which it occurs.

Quicksilver

Cinnabar, the sulphide of quicksilver, has been found in the placer deposits of Custer and Valley Counties and in lode deposits in Valley and Cassia Counties. The quicksilver lode deposits of Valley County have been developed in a small way, and a little quicksilver has been produced.

Tin

The occurrence of tin has been reported in one placer deposit of Lemhi County.

Tungsten

Tungsten is widely distributed throughout the State; and deposits of commercial importance have been found in Shoshone, Lemhi, Idaho, Boundary, Camas and Butte Counties. Those in Shoshone and Lemhi Counties have been extensively developed, while sufficient work has been done on the others to prove their importance.

INDUSTRIAL MATERIALS

Asbestos

Commercial asbestos occurs in two forms: the chrysotile variety, which is adapted to spinning; and the amphibole, which is not adapted to spinning, but is used extensively in insulation, shingles, paper stock, wall plaster, and cements. The amphibole variety of asbestos occurs extensively in Idaho County, and deposits containing chrysotile have been reported from Teton and Fremont Counties.

Barytes

Large commercial deposits of barite are found on Deer Creek near Halley and in the Muldoon section in Blaine County.

Bauxite

A large deposit of bauxite on Mink Creek, Bannock County, has recently been reported.

Building Stone

Sandstone excellently adapted to building purposes is found in Ada and Cassia Counties.

Coal

Bituminous coal of commercial importance occurs in Teton, Bonneville and Fremont Counties. The deposits in Teton County have been developed in a small way. Lignite is found in Cassia, Boise, Owyhee, Washington, Idaho, and Clear-water Counties.

Diatomaceous Earth

Extensive beds of a pure white chalky appearing mineral closely resembling diatomaceous earth are found in Elmore, Camas, Payette, Washington, and Owyhee Counties.

Limestone

Limestone is found in a large number of counties. It has been commercially developed in Butte and Bonner Counties, and deposits of equal importance are found in Bannock and Blaine Counties.

Mica

Mica is found in Latah, Adams, and Idaho Counties. The mica mines in Latah County have produced a large amount.

Mineral Waters.

Hot springs occur at a great many places throughout the State; their waters are excellently adapted to health and pleasure purposes. The mineral waters of Caribou County are particularly efficacious from a therapeutic standpoint.

Phosphate Rock

Immense beds of phosphate rock are found in southeastern Idaho, particularly in Bear Lake, Caribou, Bannock, Bonneville, Bingham, Fremont, and Teton Counties.

Salt

The pioneers evaporated the brine from the salt springs of Caribou County, and the salt was transported to all of the northwestern states before the advent of the railroad. Caribou is the only county in the State where salt of commercial importance occurs.

Sulphur

Extensive deposits of native sulphur occur in a number of places in Caribou County.

Oil and Gas

Structures favorable to the accumulation of oil and gas in commercial quantities are found in Caribou, Bonneville, Teton, and Bear Lake Counties. Gas has been developed in Payette and Washington Counties; and a small amount of drilling has been done in Owyhee, Washington, Payette, Cassia, and Power Counties.

PROMINENT 1922 ACTIVITIES

Mining, excepting for gold, experienced a revival during 1922. Many properties that had been idle during the previous year resumed operations. There was a large increase in production; number of men employed; new companies formed; prospectors; and investigators looking for properties. The factors responsible for this improvement were the gradual return of the country to normal business conditions; the marked increase in the price of lead, zinc and copper; the Pittman Act; and the reduction in freight rates.

The principal new developments of the past year that promise to be permanent can best be outlined by reviewing generally the largest mining counties.

ADAMS COUNTY

The Idaho Copper Co., Ltd., continued active work in further prospecting the large mineralized zone in the famous Red Ledge group, which promises to give Idaho a large producing copper mine. Three companies developing the high grade silver-copper deposits on Indian Creek disclosed important showings. One of these, the Azurite Mining Co., rehabilitated its mill, added new equipment, constructed a small hydroelectric power plant, and commenced production. The high grade gold deposits recently discovered on Cuddy mountain were actively developed as were also the mica deposits on Council mountain.

BEAR LAKE, CARIBOU AND BONNEVILLE COUNTIES

Practically all of the phosphate mines were closed throughout the year. The mines that continued operation in a minor way produced a small tonnage. The Anaconda Copper Mining Co. continued construction work and mine development; and is now in a position to maintain capacity production whenever conditions justify. The Wallace-Wyoming Oil Co., operating in one of the most favorable locations in Idaho, extended its well to a depth of 700 feet. The Caribou Placer Co., Mt. Pisgah district, Bonneville County, a recent entry into Idaho, installed a large hydraulic plant and equipment, constructed a new camp, and is prepared to commence operations early in 1923.

BLAINE COUNTY

During 1922 Blaine County enjoyed the largest mining activity that it has witnessed for many years. Numerous prospectors actively engaged, many discoveries and investigations, and a large increase in the ore reserves of the operating mines were responsible for the growth that has taken place. The Federal Mining & Smelting Co. continued capacity production from the Independence mine, and the Bunker Hill & Sullivan Mining & Concentrating Co. maintained active development work at Bullion throughout the year. The principal discoveries and new ore developments in the Hailey section were those of the Consolidated Mascot Mines Corporation, Federal Mining & Smelting Co., Colorado Mining & Milling Co., Utah-Bellevue Mines Co., Mineral Hill Mining & Milling Co., Jack Nelson and Floyd Wilson. The United Mines Co., operating in the Muldoon district, exposed considerable new ore; and one other mine increased its operations. The large high grade deposits of barytes on Deer Creek near Hailey received considerable attention; and one property was pur-

chased by the Bunker Hill & Sullivan Mining & Concentrating Co., presumably in anticipation of the construction of its zinc smelter at Kellogg. The most important transaction of the year was the acquisition of the Homestake group on Lake Creek, above Ketchum, by the Mineral Exploration Co., a strong company well financed and directed by prominent mining engineers.

BOISE COUNTY

The activities in this county during 1922 did not meet expectations; but the interest shown in prospecting, and the new developments exceeded that of 1921. Fire destroyed the hydroelectric power plant on the South Fork of the Payette River. While the plant was being rebuilt, the Gold Hill & Iowa was closed down, but, excepting for this loss of time, capacity production was maintained as well as a large amount of exploration work. Although this mine was closed down again in December, the pumps have been kept running. The lead-silver districts were more active than the gold districts, with three companies operating, two of which made some small shipments during the year. The Golden Age Junior Mining Co. has completed plans and commenced construction on a new concentrating mill; and the Mineral Mining Co. built and operated a small testing plant.

BONNER COUNTY

The Armstead success has been a very material factor in stimulating the activities of this county and in causing it to become recognized as a mineral producing county. The mill and plant installation of the Armstead Mines Co. was the largest undertaking started in the State during 1921, and was completed in 1922. The mill was started in March; since then capacity production has been maintained without interruption. This property is now owned by the Talache Mines, Inc., and is the largest producer and dividend payer in the State to come in during 1922.

The Clark Fork district had a revival: the Lawrence Mining & Milling Co. resumed operations under lease; the Mimetite made its initial shipment; one company developing a copper prospect was active; and a large amount of prospecting was done in the Cabinet section, with very encouraging results. The Priest Lake district also had a substantial revival; two important ore discoveries were made; and the outlook is much brighter. The Lakeview district had a marked increase in development and in interest shown: The Lakeview Silver Mines Co. is contemplating the erection of a new reduction plant; and after many years of litigation the Supreme Court returned the Webber mine to its original status, and the mine will shortly be reopened. The Pend d'Oreille district recorded a considerable increase in activity, with one company developing a very good showing. The future of this county is very encouraging.

BOUNDARY COUNTY

The Continental Mine, which was idle throughout 1921, resumed operations early in 1922. The mill was rehabilitated, a flotation unit added, and capacity production maintained. This is one of the largest lead producing mines in Idaho, and is a material factor in the prosperity of Boundary County. The Cynide Gold Mining Co. installed a new sawmill, and practically completed the erection and installation of a 200-ton cyanide plant. The Idaho Gold & Ruby Mining Co. completed its plant installation and has promised production in 1923. During 1922 there was a decided increase in prospecting and small developments over the previous year.

BUTTE COUNTY

The principal mining operation in this county is that at the large limestone quarries at Arco, where all of the limestone used in the sugar factories of Idaho and Utah is mined. These quarries employ about 60 men, and a larger tonnage was produced during 1922 than in the previous year. The Wilbert Mining Co. moved its camp, buildings, and equipment to the location of its new No. 4 tunnel, and drove this tunnel over 1500 feet during the year. The Lava Creek and Badger Creek districts had a very marked increase in activities, and a small amount of ore was shipped during the year.

CLEARWATER COUNTY

Only a small amount of placer mining was done. A new hull was constructed for the Bailey Dredge; the equipment was moved from its previous location to Rhodes Creek; and active dredging was started in September. The Bole Consolidated Mining Co. built a new camp, cleaned out the old tunnels and shaft, and commenced active development work. These activities added considerable to the progress of the county over the year 1921.

CUSTER COUNTY

Custer County, the largest copper producing county in the State and one of the important lead producing counties, recorded a substantial revival. All of the producing mines maintained capacity production, and several new companies entered the county during the year. The principal new operators were the Bruno Mining & Milling Co., on Squaw Creek, and J. E. Walker and associates, who acquired the Livingston group. The Idaho Metals Co., operating the Empire Copper mine at Mackay, resumed operations in November, 1921, and maintained capacity production throughout 1922. This mine is operated under the leasing system and is the largest copper producer in the State. The Horse Shoe Copper Co. and the Canady mine, both lead producers at Mackay, had a large increase in production over 1921. The Ramshorn Mines Co., at Bay Horse, one of the largest silver mines in the State, maintained capacity production throughout the year. The Idaho Mine Development Co., operating the Red Bird Group at Clayton, greatly increased its ore reserves and production. The increase in prospecting and development throughout the county was marked and substantial.

ELMORE COUNTY

One of the most important additions to Idaho mining during 1922 was the completion of the dredge of the South Fork Dredging Co., which is operating on the Feather River at Featherville. This installation represents an expenditure of over \$500,000. As Elmore County is chiefly a gold producing county, the other activities did not greatly exceed those of 1921, although there was a slight increase in prospecting.

IDAHO COUNTY

Idaho County, once a famous gold producer, and a county with more gold mining opportunities than any similar area in the United States, recorded a greater activity during 1922 than in the previous year. Although this increase did not meet expectations, the resumption was substantial. The Unity Gold

Mines Co., at Warren, was the largest producer and the most active gold mine in the county. The Homestake Gold Mining Co., at Elk City, had a large payroll and was active throughout the year. The acquisition of the Walker & Wilcox group by E. E. Carter and associates, and the new gold discovery at Dixie, were the two most important events.

LEMHI COUNTY

The disclosures at Silverton, the newly discovered lead district lying east of Salmon; the new ore encountered at Viola and Spring Mountain; and the resumption of operations and continued production at the principal copper and lead mines, were all responsible for the very material increase in activity and production. The Harmony Mines Co., a large copper producer, resumed operations early in 1922. The Pope-Shenon, also a copper producer, was leased to George A. and William M. Snow, who converted the volatilization plant into a concentrator and immediately commenced production. The lead mines at Gilmore—the Latest Out Mining & Smelting Co. and the Pittsburgh-Idaho—maintained capacity production. The return to gold mining did not come up to expectations; however, there was a material increase over the previous year.

OWYHEE COUNTY

Owyhee County, once one of the principal gold-silver producing counties in the State, had a substantial and marked increase in mining developments, new discoveries and investigations. The strikes made by George Westlake and the Never Sweat Mining Co., and the resumption of operations at Demming were the most important events. The Flint mine enlarged its force and completed plans for the erection of a reduction plant. Practically all of the companies that operated during 1921 were active throughout 1922.

SHOSHONE COUNTY

The revival in this county during 1922 was almost complete. All of the mines that were idle in 1921 resumed operation at capacity production, and those that remained in operation increased their output. With every important mine running, a total of over 3600 men on the payrolls, lead and zinc commanding a high price, and dollar silver, conditions could not be much better. Many new discoveries were made in the smaller mines; numerous old prospects were reopened; the Star crosscut is progressing rapidly; Success is staging a come-back; Galena, Lookout Mountain, Big Creek and Western Union are proving to be real new mines; and the new developments on the lower levels of the Bunker Hill, Hecla and Morning give assurance that the life of these mines will extend over many years.

The principal outstanding events of the year affecting mining activities and the future prosperity of the county were as follows:

The settlement of the action brought by the late E. R. Day and Mrs. Sarah E. Smith against the Hecla Mining Co. and Bunker Hill and Sullivan Mining & Concentrating Co., and the subsequent ratification by the Hecla stockholders of the agreement between the Hecla and the Bunker Hill for the purchase and operation of the Star mine.

Continuous work on the Star crosscut, which was extended to over 5100 feet in length.

Discovery of a large vein on Kellogg Peak parallel to the famous Bunker Hill vein, and on Bunker Hill and Sullivan ground.

Discovery of a new ore shoot in the Success mine.

Increase in size and value of Hecla ore bodies on lower levels.

Resumption of operation by Hercules, Tamarack & Custer Consolidated, and Callahan Zinc Lead companies.

Reduction in freight rates.

Bunker Hill Smelter contracting its entire lead output for a period of five years to the St. Joseph Lead Co.

Increase in wages, plus a 50 cent bonus.

Federal Mining & Smelting Co. sold all of its accumulated zinc concentrates and contracted future delivery.

Consolidation of Galena Mining Co. and Callahan Zinc Lead Mining Co.

Tamarack & Custer Consolidated Co. increased capital stock to 5,000,000 shares and declared a 166 per cent stock dividend.

Hecla Mining Co. paid an additional dividend of \$500,000, making a total of \$950,000 in dividends for the year.

VALLEY COUNTY

This county had a substantial increase in new development and construction over the previous year. The quicksilver mines at Yellow Pine, being developed by the United Mercury Mines Co., were active. A new retort was installed and put into operation; and development in the mine continued throughout the year. The Profile and Deadwood districts had a decided improvement. The event of most importance to the county was the progress of construction work on the new highway from Cascade to Yellow Pine.

WASHINGTON COUNTY

The production, increase in prospecting, and development work in this county during 1922 was practically double that of 1921. Most of the new development was substantial and there is promise of decided improvement in the future.

BLUE SKY

During the past biennium the incumbent has been particularly alert in endeavoring to suppress fraudulent advertising and promotions, as well as closely watching for Blue Sky law violations. The results have been very encouraging and the investing public is beginning to realize the benefit of this watchfulness.

FOREST RESERVE

Practically every acre of land in Idaho that is of value for mining purposes is included within a forest reserve. The past biennium witnessed an active road building campaign throughout a large number of the forest reserves by the Forest Service. These roads are going to be of inestimable value in the development of the mineral wealth of the isolated sections. The road up the South Fork of the Clearwater River into the Elk City, Dixie and Buffalo Hump districts and the one from Cascade into Yellow Pine and Thunder Mountain are both fully justified and badly needed.

The road building campaign undertaken by the Forest Service is commendable, but the attitude of many of the minor officials toward mining and the mining public on the reserves is open to criticism; and this criticism applies particularly to their eagerness to contest and question mineral locations and their refusal to protect from sheep grazing sufficient land for the domestic stock owned by the prospector and those in the small settlements.

MEN EMPLOYED AND WAGES

The year closed with over 6300 men employed; an increase of 1550 over the average number employed during 1921. Of this number 5300 men were listed on the payrolls of reporting companies; a conservative estimate of 1000 has been added to cover the leasers, men employed by the leasers and the small operators that did not report. There has been a large turnover created by the shortage of miners and the reopening of all the mines of the Coeur d'Alene district that were closed during 1921. The extraordinary fluctuations caused by this turnover have made it practically impossible to give the average employed for the year.

The 1921 wage scale prevailed until October 1 when an increase of from 25 to 50 cents per day was made. This increase did not affect shovelers and surface laborers, but did apply to miners. The effect of the increase is certain to be very beneficial. Heretofore, miners and muckers have received the same wage and, rather than to assume added responsibility, miners have all been hiring out as muckers. This new differential in wages is sufficient to attract the men back to the machines, and should eliminate the shortage of miners that existed throughout 1922.

The wage table printed below gives the average wage that was in force throughout the State. When wages were increased on October 1, a bonus of 50 cents per day to all classes of labor was given throughout the Coeur d'Alenes, so it is necessary to add this to the "After October 1st" table for the full wage paid in this district.

	Prior to October 1	After October 1
Miners	\$4.00 to 4.25.....	\$4.50
Shovelers	4.00	4.00
Timbermen	4.75	5.00
Timber helpers	4.00	4.25
Machinists	5.25	5.25
Carmen	4.00	4.00
Motormen	4.25 to 4.75.....	4.25 to 4.75
Main hoistmen	5.25	5.25
Small hoistmen	4.00 to 4.75.....	4.25 to 4.75
Pump and compressormen	4.75	4.75
Surface laborers	3.75	3.75
Ore sorters	3.75	3.75
Cagers	4.75	4.75
Shift bosses	5.75	5.75
Blacksmiths	4.75 to 6.00.....	5.25 to 6.00
Blacksmith helpers	4.00	4.25
Electricians	4.75	4.75
Millmen	4.25	4.25
Mill repairmen	5.25	5.25
Mill swampers	3.75	3.75
Carpenters	5.25 to 7.00.....	5.25 to 7.00

Throughout the State, board and room averaged about \$1.25 per day at company boarding houses. Many companies have built houses which are rented to the married men at a nominal amount.

ACCIDENTS

A comparison of the proportion of total accidents with men employed during 1921 and 1922 shows a material decrease. This decrease can be attributed to the safety provisions installed and safety organizations maintained by practically all of the large operators, as well as to their endeavor to make their mines as safe as possible and to the spirit of cooperation and good will that many of them have engendered among the men. The success that is possible from efforts of this kind has been demonstrated by the Bunker Hill & Sullivan Mining & Concentrating Co. Its mine is one of the largest lead mines in the world and this company employs a larger number of men under ground than any other company in the State. Its annual production of crude ore is approximately 500,000 tons, from a mine with many miles of underground workings. Considering the magnitude of the mine and the number of men employed, this company has made an enviable record for itself in the past three years. During this time, neither under ground nor on the surface, has there been one fatal accident. Credit for this record is also due to the sustained effort and interest in safety work and alert supervision of the mine superintendent, William McDougall, and his efficient foremen, Zeb White and James Lee. The Hecla Mining Co. is also to be commended for the excellent *esprit de corps* that exists and the particular attention that is given to safety first.

The minor accidents in the accompanying table, "Classification of Accidents" are taken from the records of the industrial accident board and arranged to comply more nearly with the classifications made by the U. S. Bureau of Mines. This table is somewhat misleading as a very large proportion of the accidents listed under "Over 14 Days" did not greatly exceed this number of days. The majority of those listed under "One to 14 Days" did not exceed seven days, consequently no compensation was paid and these should not be considered as accidents, although they have been listed as such.

During the year there was no large mine disaster and the majority of all the accidents that occurred, both fatal and minor, can be attributed directly to the carelessness of the one involved.

NOTES ON FATAL ACCIDENTS

January 3, Federal Mining & Smelting Company, Shoshone County. Pete Pezzetti, age 40, single, shoveler in mine, was struck by a solid slab of ore which fell from the roof without warning. Evidently the water seepage along a talc slip on the hanging wall caused the slab to loosen and it suddenly dropped.

January 10, Hecla Mining Company, Shoshone County. Jack Sandmo, age 28, single, timberman's helper, was helping timbermen move a heavy cap. The timber slide opening on this floor was about 30 inches wide and was covered securely with 5 foot lagging, leaving over 1 foot of lap at each end of lagging. Sandmo was standing on lagging over slide and had picaroon in cap preparing to move same. When Sandmo and the other men moved the cap it rolled slightly and struck the two lagging which were over the slide and on which Sandmo was standing, knocking them forward and into the slide. Sandmo fell through the hole and dropped seven floors to the safety door over the drift.

March 30, Unity Gold Mines, Idaho County. John Kegan, age 36, single, miner, was working in stope which was filled with muck to within 6 feet of the back. Some ore 6 inches wide which had been stripped on the hanging wall broke loose, struck him on the back of the head, pinned his head to a timber and killed him instantly.

CLASSIFICATION OF ACCIDENTS

MINE	Killed	Seriously Injured Time lost, more than 14 days		Slightly Injured		MILL	Killed	Seriously Injured Time lost, more than 14 days		Slightly Injured	
		Perma- nent total disa- bility	Perma- nent partial disa- bility	Time lost over 14 Days	Time lost 1 to 14 days			Perma- nent total disa- bility	Perma- nent partial disa- bility	Time lost over 14 Days	Time lost 1 to 14 days
UNDERGROUND						MILLING ACCIDENTS					
1. Fall of rock or ore from roof or wall.....	4		1	76	111	1. Haulage (cars and motors)				1	
2. Rock or ore while loading at work- ing face or chute			1	31	34	2. Railway cars or locomotives					
3. Timber			2	37	38	3. Crushers, rolls or stamps					
4. Explosives	2			5	3	4. Tables, jigs, etc.					
5. Haulage			1	41	31	5. Other machinery		2	2	1	
6. Persons falling down chute, winze, raise, or stope	2		1	15	8	6. Falls of persons	1			4	4
7. Run of ore from chute or pocket.....			1			7. Suffocation in ore bins					
8. Drilling (by machine or hand drills)....			2	21	21	8. Falling objects (rocks, timbers, etc.)...				5	4
9. Hand Tools			1	17	31	9. Cyanide or other poisoning					1
10. Machinery (other than locomotives or drills)			2	6	8	10. Scalding (steam or water)					
11. Flying and falling objects			4	21	86	11. Lifting				3	1
12. Fall of persons				25	39	12. Hand tools, axes, bars, etc.					
13. Lifting				15	25	13. Nails, splinters, etc.					
14. Nails and splinters				2	23	14. Flying pieces of rock from sledging or crushing					3
15. Other causes				15	32	15. Other causes				4	4
Total	<u>8</u>		<u>16</u>	<u>327</u>	<u>490</u>	Total	<u>1</u>	<u>2</u>	<u>19</u>	<u>18</u>	
SHAFT ACCIDENTS						SMELTER ACCIDENTS					
16. Falling down shaft						16. Haulage (cars, motors, etc.)			1	1	
17. Objects falling down shaft					3	18. Cranes				1	
18. Breaking of cables						19. Other machinery				2	
19. Overwinding						20. Falls of persons				2	1
20. Cage, skip, or bucket	3		1	6	2	21. Suffocation in ore bins					
21. Other causes						22. Flying or falling objects (rocks, tim- bers, etc.)		1	7	2	
Total	<u>3</u>		<u>1</u>	<u>6</u>	<u>5</u>	23. Gas (burns or asphyxiation)					
SURFACE ACCIDENTS						AUXILIARY WORKS' ACCIDENTS					
22. Mine cars or mine locomotives, grav- ity or aerial trams				5	2	25. Electricity					
23. Flying and falling objects				14	23	26. Hand tools, axes, bars, etc.				3	
24. Lifting				3	7	27. Nails, splinters, etc.					
25. Falls of persons				21	17	28. Burns from matte, slag, or molten metal (pouring or spilling)				3	
26. Nails and splinters				1	4	30. Lifting				3	
27. Hand tools, axes, bars, etc.....				4	12	Total		<u>2</u>	<u>22</u>	<u>3</u>	
28. Electricity	1				3	AUXILIARY WORKS' ACCIDENTS					
29. Machinery			1	2	1	34. Falling objects (rocks, timbers, etc.)...				2	
30. Other causes				6	5	35. Nails and splinters					1
Total	<u>1</u>		<u>1</u>	<u>56</u>	<u>74</u>	38. Machinery			1		
OPEN PIT ACCIDENTS						41. Hot steam pipe				1	1
31. Falls or slides of rock or ore.....	1					Total		<u>1</u>	<u>3</u>	<u>2</u>	
Total	<u>1</u>					Grand Total					
Grand Total	<u>13</u>		<u>18</u>	<u>399</u>	<u>569</u>		<u>1</u>	<u>5</u>	<u>44</u>	<u>23</u>	

May 30, Pope Shenon Mining Company, Idaho County. W. L. Thompson, age 48, married, miner, was killed in transformer house. The power was low and he and a companion went to the transformer house to examine the transformers. Thompson walked between the transformer and the lightning arrester. The distance between the two is not over 2 feet. Death was instantaneous.

June 21, Gold Hunter Mining & Smelting Company, Shoshone County. Clyde W. Fitzwater, age 37, married, miner, was overcome with gas in a filled stope with cribbed manway and chute from which a raise was being driven to the level above. Fitzwater and companion went up the cribbed manway, covered the opening, evidently not blowing the stope, and went to work sorting and shoveling. In pulling the muck from the raise they evidently released powder fumes from the previous shooting and both were overcome by gas. Fitzwater fell with his face in the gassy muck and was probably dead when found, although the pulmotor was used. The other man fell with face over a crack in the closed manway and recovered.

July 11, Federal Mining & Smelting Company, Shoshone County. Henry Storjohan, age 47, married, hoisting engineer, was caught under cage and died from internal injuries in 12 hours. In order to remove the double deck cage from the shaft opening at the 800 station tunnel level, a short portable track is laid across the shaft opening, resting in grooves provided for the purpose. On this track the truck receiving the cage is run in across the shaft opening and out again on to the station turnsheet. The cage truck is about 1½ feet high and the double deck cage is over 16 feet high to the top of the hood. The upper guide shoe on one side of the cage caught against the shaft timbers as the truck was moving forward into the station from its position in the shaft. Storjohan, observing this, picked up a handy pevy to pry the cage loose from the side where it was caught. The cage came suddenly loose, over-balanced and toppled over forward. Storjohan was caught under the cage as it fell forward and suffered a fractured skull, broken leg and internal injuries.

July 23, Federal Mining & Smelting Company, Shoshone County. Patrick Ryan, age 50, single, shoveler, coming on shift at about 3 p. m. went in where day miners were loading the holes at the west face of drift. He then went into east face some 350 feet east, knowing the miners were preparing to blast and were going off shift. The miners lighted their fuses and went down the raise to the level. Ryan, evidently forgetting himself, went back, passed the raise into the west end again, and got about 50 feet from the face when the shots commenced to go. He suffered a compound fracture of the right femur, developed tetanus July 31, and died August 1.

September 19, Hercules Mining Company, Shoshone County. John A. Murphy, age 42, single, miner, was struck by a slab falling from the hanging wall. Murphy and his partner had been barring on this slab all morning, as they were mucking back the broken rock that was piled around it. After most of the broken rock had been removed, Murphy struck the slab with a pick, causing it to fall and pin him underneath. He was instantly killed.

September 23, Gold Hill & Iowa Mines Company, Boise County. Nels Mathison, age 68, single (widower), mucker, fell from chute on 23d floor of a stope. It is not known exactly how the accident happened, but it is believed that Mathison stood on a cracked lagging that broke, dropping him to the floor below from which he rolled into an unfinished chute which was open on three sides. Death was instantaneous.

October 9, Federal Mining & Smelting Company, Shoshone County. Jack Hany, age 42, single, miner, was struck by an angular wedged-shaped piece of ground which fell from between two talc slips. Hany had barred down all the back that appeared to be loose, but was not satisfied to leave it without spragging. He was walking in on the hanging wall side with a sprag that he intended to put in on the foot wall side when the ground fell and caught him.

October 31, Hercules Mining Company, Shoshone County. Michael E. Welsh, age 53, married, mine foreman, was injured while on jitney cage about 10 feet below 800 level. It is not known exactly how the accident happened, as he was alone at the time. There were five lengths of 2-inch pipe about 12 feet long on the cage with him. It is supposed that either he let the pipe get away from him, allowing it to catch the timbers in the shaft, thus causing the cage to stop suddenly, which threw him against the timbers, or that he had an attack of dizziness (of which he had complained that morning as well as several days before), causing him to fall out and strike his head on the shaft timbers, and at the same time knocking the pipe out of the cage against the shaft timbers, thus stopping the cage suddenly. He died while on the way to the hospital.

November 4, Tri Metals Milling Company, Shoshone County. Burt Hartwell, age 47, mill shift boss, coming down the mill stairs, slipped and fell, hitting on his back and head. Upon recovering consciousness, although feeling ill, he insisted upon working the shift out. He came down to work the following night, but an hour later was compelled to return home. He died November 7.

November 6, The Amalgamated Sugar Company, Butte County. Dan W. Hurst, age 75, single (widower) rock breaker, was loading rock in mine car at the foot of an incline and about 30 feet from a vertical ledge of rock, when about 25 to 50 tons of rock gave way from top of ledge which was about 50 feet high. One of the men saw the rock as it gave way and yelled a warning to the others. Other men working with him heeded the warning and ran to safety. Hurst did not run at once, but looked all around first. He first saw the oncoming rock as it struck a bench at the top of the incline, and then ran to the end of his mine car, apparently thinking himself in the clear. He stopped and looked back, and as he did so was struck by the smaller fragments of rock from the slide and was crushed against the small mine car.

December 21, The Callahan Zinc Lead Company, Shoshone County. Alex Stod, age 33, single, Cager, was on cage conveying a load of air drills. Evidently drills were not securely fastened and they tipped over, throwing Stod between cage and shaft timber, from which position he was thrown between cage and wall and landed in the sump.

ADA COUNTY

The principal mineral resources of this county is the excellent quality of building stone that is quarried from Table Rock mountain. This stone is a soft fine grained sandstone, easily cut and excellently adapted to building purposes, and has been used extensively in the State Capitol Building and many of the buildings of Boise.

Other than a small number of prospectors in the Black Hornet district all of the lode mines were idle throughout the year. Many excellent veins are to be found in this district and considerable development work and mill construction has been done in the past, all of which was on the assumption that the ore was a free milling gold. At a few feet in depth the sulphide zone was encountered, so practically all of the ventures proved failures. Under modern metallurgical methods and proper direction many of the deposits in this district present favorable opportunities.

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Blue Grouse Ext.	Black Hornet	Goodwin & Thacker	Boise
Blue Grouse et al	Black Hornet	C. R. Adelmann	622 Idaho St. Boise
Five Mile Gr.	Shaw Mountain	J. M. Roberts	1110 E. Bannock St., Boise
Gold Eagle Gr.	Black Hornet	C. C. Anderson	Boise
Gold Queen Gr.	Black Hornet	P. J. McLaughlin	Boise
Hidden Treasure	Black Hornet	W. P. Richards	Boise
Maynard Bros.	Highland	H. T. Maynard	Boise
Monitor Placer	Highland	W. E. Johnston	Boise
Sorrel Horse et al	Black Hornet	N. R. C. Adelmann	221 Jefferson St., Boise
White Mineral	Black Hornet	H. J. Leppert	506 S. 3d St., Boise

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ADAMS COUNTY

Adams County, the home of the Seven Devils, is destined to become one of the largest producers in the State, the principal minerals being copper, silver, gold, lead, zinc and mica. The famous Red Ledge group, being developed by the Idaho Copper Co., Ltd., is standing up in excellent shape under the development work that was done during the year. A large tonnage of ore has been proven and the company expects to start its operating tunnel from Eagle Bar on the Snake River in the near future. When this tunnel is completed and plant installed it will represent a very large expenditure. A number of smaller companies and prospectors were engaged in developing their copper prospects throughout the year.

The high grade silver-copper deposits on Indian Creek were under active development in 1922. Three companies operating in this section have an excellent showing. Under proper direction these silver deposits will become a material factor in the mineral resources of this county. The high grade gold deposits recently discovered on Cuddy Mountain were actively developed during the year. The extensive prospecting and new development work that was done in this vicinity resulted in very encouraging showings and considerable activity in the near future is anticipated. A number of prospectors were busily engaged throughout the year in developing the mica deposits on Council Mountain. Commercial mica has been exposed in some of the prospects and one is safe in assuming that this resource will eventually add to the activities of the county.

AMERICAN MINING CO., LTD.

Office: 630 Monroe St., Helena, Mont. **Officers:** Amelia H. Kleinschmidt, Pres., Helena, Mont. **Inc.:** Sept. 11, 1911. **Capital:** 40,000 shares; par value, \$1; none issued. **Property:** Peacock and White Monument groups; 10 patented claims, Seven Devils dist.; Cuprum. **Ore:** Copper, silver. **Remarks:** Idle for many years.

AZURITE MINING CO.

Office: 209 French Bldg., Tacoma, Wash. **Officers:** A. C. Merrill, Pres.-Mgr., 209 French Bldg., Tacoma, Wash. **Inc.:** Jan. 2, 1920. **Capital:** 999,000 shares; par value \$1; 700,000 shares issued. **Property:** 1 patented, 5 unpatented claims held under lease and bond, Seven Devils dist.; Homestead, Ore. **Development:** 3 tunnels, 1 shaft; No. 1, crosscut, 200 ft. long; No. 2, drift on vein, 375 ft. long; No. 3 drift on vein, 650 ft. long; vertical shaft, 100 ft. deep. Total development, approximately 1500 ft. **Plant:** MILL: Small concentrator, crusher, rolls, Forrester rod mill, Wilfley tables and Ziegler flotation. Gas driven. Small hydroelectric power plant and mining equipment. **Ore:** Silver-copper, zinc. **Men employed:** Average 12. **Remarks:** The mill building was completed and machinery installed during the year. New cook and residence houses and wagon road connecting mine with the Kleinschmidt grade were constructed. The company reports a considerable tonnage of ore blocked out and a number of shipments were made during the year.

HERCULES NITRATE CO.

Office: Twin Falls. **Officers:** C. L. Longley, Pres., Boise; H. J. Matthews, Sec., and O. A. Matthews, Mgr., both of 1102 N. Sixth St., Boise. **Inc.:** Aug. 11, 1917. **Capital:** 1,000,000 shares; par value, \$1; 763,620 shares issued. **Property:** Cracker Jack group; 6 unpatented claims, Indian Creek, Seven Devils dist.; Cuprum; R. R., Homestead, Ore., 8 miles. **Development:** 3 tunnels: No. 1, 288 ft. long; No. 2, 350 ft. long; No. 3, 300 ft. long; opening the vein 450 ft. in depth. Total development, approximately 1200 ft. **Plant:** Camp and hand mining equipment. **Ore:** Silver-copper. **Men employed:** average, 2. **Remarks:** The company has been actively engaged in developing its property throughout the year and reports a good showing of ore in all workings.

IDAHO COPPER CO., LTD.

Office: 843 Title Insurance Bldg., Los Angeles, Cal. **Officers:** O. H. Griggs, Pres., Minneapolis, Minn.; Mayor Hoppenyan, Sec., Los Angeles, Cal.; Frank A. Kennedy, Mgr., 409 N. 19th St., Boise. **Inc.:** Jan. 10, 1920. **Capital:** 50,000 shares; par value, \$10; 15,000 shares issued. **Property:** Red Ledge group; 53 unpatented claims, held under lease and bond, Seven Devils dist.; Cuprum; R. R., Homestead, Ore., 18 miles. **Development:** 4 tunnels: No. 1, 90 ft. long; No. 2, 450 ft. long; No. 3, 500 ft. long; No. 4, 100 ft. long; opening the vein approximately 1000 ft. in vertical depth. In addition to the tunnels, approximately 6000 ft. of diamond drilling has been done on the property. **Plant:** 50 h. p. water wheel driving compressor; complete mining equipment and camp. **Ore:** Copper-silver-gold. **Men employed:** Average, 6. **Remarks:** Statements made by the management and verified by exploration work indicate an immense tonnage of low grade copper ore. During the year the company has been driving additional adits to prove further the work of the diamond drill. This work is proving a large tonnage of ore. When the extent of the different ore bodies proven by the diamond drill has been fully demonstrated the contemplated 6000 ft. tunnel from Eagle Bar on Snake River will probably be started. When this tunnel is completed and plant installed, Idaho will have at least one large copper producer equal to the "porphyrys" of other states.

IDAHO MINES CO., LTD.

Office: Weiser. **Officers:** S. H. Travis, Pres., Chehallis, Wash.; B. S. Varian, Sec., Weiser. **Inc.:** Jan. 5, 1904. **Capital:** 5,000,000 shares; par value, \$1; 1,503,000 shares issued. **Property:** California group; 3 patented claims, Seven Devils dist.; Cuprum; R. R., Homestead, Ore., 15 miles. **Ore:** Copper. **Remarks:** Idle for many years.

INDIAN CREEK MINING & DEVELOPMENT CO.

Office: 610 Overland Bldg., Boise. **Officers:** William J. Tait, Pres., Lawrence Mass.; George D. Reid, Sec.-Treas., Fillmore, Cal. **Inc.:** Oct. 22, 1909. **Capital:** 100,000 shares; par value, \$1; 82,553 shares issued. **Property:** 3 patented, 2 unpatented claims, Indian Creek, Seven Devils dist.; Cuprum. **Development:** Approximately 800 ft. of underground workings. **Ore:** Copper. **Remarks:** Idle since before the world war.

MINES SELECTION COMPANY OF AMERICA

Office: 206 Tacoma Bldg., Tacoma, Wash. **Officers:** W. T. Dumbleton, Pres.-Mgr., Tacoma, Wash. **Inc.:** June 20, 1920. **Capital:** 1500 shares; per value, \$100; 830 shares issued. **Property:** Newton Hill group; 11 unpatented claims, Seven Devils dist.; Cuprum; R. R., Homestead, Ore., 4 miles. **Ore:** Copper. **Remarks:** Idle.

NATIONAL COPPER MINES CO.

Office: 1032 Chamber of Commerce Bldg., Portland, Ore. **Officers:** William Trevor, Pres.-Mgr., 851 E. 7th St. N., Portland, Ore.; Ray Fennell, Sec., 512 Oregon Bldg., Portland, Ore. **Inc.:** April 26, 1906. **Capital:** 3,000,000 shares; par value, \$1; 1,645,800 shares issued. **Property:** 35 unpatented claims, Seven Devils dist.; Cuprum. **Development:** Approximately 2000 ft. of underground workings. **Plant:** Small steam driven compressor and equipment. **Ore:** Copper. **Men employed:** Average 2. **Remarks:** The men employed were doing principally assessment work throughout the year.

GILMAN RINEHART

Council. **Property:** 18 unpatented claims, unorganized dist.; Council. **Development:** Approximately 500 ft of underground workings. **Ore:** Mica; Gold. **Remarks:** 15 ledges of mica and three or four gold veins exposed.

ROCK FLAT MINING & MILLING CO.

Office: 302 Idaho Bldg., Boise. **Officers:** D. L. Young, Pres.-Mgr., Boise. **Inc.:** Sept. 6, 1904; charter forfeited Dec. 1, 1922. **Capital:** 1,000,000 shares; par value, \$1; all issued. **Property:** Rock Flat group; 10 unpatented placer claims, unorganized dist.; McCall. **Remarks:** Assessment work only.

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Arkansaw	Seven Devils	Ladd Metals Co.	Portland, Ore.
Badger Gr.	Seven Devils	P. H. Miller	Huntington, Ore.
Blue Bird et al	Seven Devils	Frank Shelton	Cuprum
Cliff Gr.	Seven Devils	P. L. Geardon	Bear
Copper Belt Gr.	Seven Devils	G. W. McCarty	Homestead, Ore.
Council Butte Gr.	Council Mt.	J. A. Baker	Cambridge
Crooked River Gr.	Cuddy Mt.	J. I. Burden	Council
Decorah	Seven Devils	R. E. Wilson	Cambridge
Deep Creek Gr.	Seven Devils	Frank Lauzon	Cuprum
Douglas	Seven Devils	J. L. Thompson	Cuprum
Flat Iron	Seven Devils	Lynes & Sprouls	Cuprum
Galena Gr.	Cuddy Mt.	A. E. Wilkerson	Baker, Ore.
Gray Bull	Seven Devils	C. C. Hoppal	Homestead, Ore.
Great Eastern	Seven Devils	Arthur David Est.	Bear
Hollister Gr.	Seven Devils	Mabel A. Gilmore	Cuprum
Last Chance Placer	Seven Devils	Walter James	Cuprum
Lead	Seven Devils	W. E. Otterson	Cuprum
Lewis Gr.	Seven Devils	G. L. Rogers	Homestead, Ore.
Lookout Gr.	Council Mt.	Louis Winkler	Council
Lucky Boy	Seven Devils	Thos. McKay	Bear
Mammoth	Seven Devils	Chas. Anderson	Cuprum
May Flower Gr.	Seven Devils	Mrs. F. Hilderbrand	Council
Moonlight	Seven Devils	J. A. Reynolds	Weiser
Mother Lode	Seven Devils	Chris Nichols	Cuprum
No Business Canon Gr.	Cuddy Mt.	Howland & Levander	Fruitvale
North Hornet Cr. Gr.	North Hornet	Frank Glenn	Fruitvale
Peck & Freese	Cuddy Mt.	W. E. Freehafer	Council
Porcupine Gr.	Cuddy Mt.	J. T. Morris	Council
Reservoir Gr.	Cuddy Mt.	Louis Winkler	Council

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
River Queen	Seven Devils	Haas Bros.	Weiser
Salzer	Seven Devils	E. D. Ford	Weiser
Silver King	Seven Devils	C. E. Moss, Agt.	Cuprum
South Peacock	Seven Devils	John Hunter	Salt Lake City, Utah
S. & R. Gr.	Cuddy Mt.	Summerville & Riley	Payette
Wagon Road	Seven Devils	Martin Bradley	Homestead, Ore.
X L Gr.	Seven Devils	F. F. Fife	Cuprum

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BANNOCK COUNTY

The principal mineral resource of this county consists of the natural hot springs at Lava Hot Springs where the state has constructed a modern resort which is very extensively known and used. Numerous large deposits of limestone suitable for Portland cement are distributed throughout the county and when properly financed and equipped should add a new industry. Considerable prospecting for copper has been done in the past, but other than a small amount of assessment work all of the properties were idle during 1922. What promises to become an important industry is a large deposit of high grade bauxite that has recently been discovered on Mink Creek. This deposit is under investigation and in all probability will be actively developed during 1923.

FORT HALL MINING & MILLING CO., LTD.

Office: Pocatello. **Officers:** W. H. Hyde, Pres.; H. M. Palmer, Mgr., both of Pocatello. **Inc.:** Sept. 5, 1902. **Capital:** 1,000,000 shares; par value, \$1; 300,000 shares issued. **Property:** Fort Hall group; 32 unpatented claims, Fort Hall dist.; Portneuf. **Development:** Principal tunnel 4000 ft. long; total development approximately 8000 ft. **Plant:** MINE: Steam driven compressor, complete mining equipment. **MILL:** 50-ton concentrator built 1909. **Ore:** Copper. **Remarks:** Assessment work only.

PAPPOOSE MINING CO., LTD.

Office: Pocatello. **Officers:** O. J. Bell, Pres. Mgr., Pocatello. **Inc.:** Dec. 12, 1906. **Capital:** 1,000,000 shares; par value, \$1; 374,129 shares issued. **Property:** Pappoose group, adjoins Fort Hall group; 10 unpatented claims, Fort Hall dist.; Portneuf. **Development:** By one tunnel, approximately 1600 ft. long. **Ore:** Copper. **Men employed:** One. **Remarks:** Assessment work only.

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BEAR LAKE COUNTY

The most important mineral deposits in this county are those of high grade phosphate rock, which are distributed over a large area. These deposits are fully described, with analyses and tonnage estimates included, in the numerous publications referred to in the bibliography. Market, freight and price conditions that existed throughout 1921 and 1922 prohibited profitable production, and with the exception of a small tonnage produced by two companies the industry was idle. Four mines are properly equipped with the necessary surface and mining plants, all have a large tonnage blocked out, and production can be resumed without delay when conditions warrant it. Eventually these deposits will assist in making Idaho the principal phosphate producing state in the Union.

Considerable prospecting for copper and lead has been done in the past, but other than assessment work all the properties were idle during 1922.

AMERICAN PHOSPHATE CORPORATION

Office: 722 Kearns Bldg., Salt Lake City, Utah. **Officers:** J. F. Nibley, Pres.-Mgr., Salt Lake City, Utah. **Inc.:** Feb. 11, 1920. **Capital:** 1000 shares; par value, \$100; 900 shares issued. **Property:** 6 claims held under lease from San Francisco Chemical Co., unorganized dist.; Montpelier; R. R. 4 miles. **Development:** Approximately 2000 ft. of underground workings. **Plant:** Crushing and drying plant, gas driven; two 25 h. p. F-M engines; one No. 5 Gates gyratory crusher; one 45 ft. American dryer; one 95 ft. 18 in. conveyor, built 1920. **Ore:** Phosphate rock. **Men employed:** Average, 4. **Remarks:** This company produced a small amount of phosphate rock during the year.

APEX MINING CO.

Office: Montpelier. **Officers:** M. L. de Jülien, Pres.-Mgr., Montpelier. **Inc.:** May 5, 1921. **Capital:** 1,000,000 shares; par value, 1c.; 400,000 shares issued. **Property:** Apex group; 4 unpatented claims, Bear Lake dist.; Pegram. **Development:** Approximately 125 ft. of tunnels and cuts. **Ore:** Gold-silver. **Men employed:** Average, 2.

BLACKSTONE MINING & POWER CO., LTD.

Office: Hood River, Ore. **Officers:** E. B. Cloud, Pres.-Mgr., Hood River, Ore. **Inc.:** Jan. 28, 1907. **Capital:** 1,000,000 shares; par value, \$1; 600,000 shares issued. **Property:** Blackstone; 1 patented claim, St. Charles dist.; St. Charles. **Remarks:** Idle.

COLORADO ^{Idaho} MINING & MILLING CO.

Office: 310 Colorado Bldg., Denver, Colo. **Officers:** A. O. McMichael, Pres.; J. J. Laton, Sec., both of Denver, Colo. **Inc.:** March 10, 1910. **Capital:** 1,000,000 shares; par value, 10c.; 578,000 shares issued. **Property:** Owns no property in Idaho but building (?) a mill on Pegram group, Bear Lake dist.; Pegram group owned by C. H. Paine, Denver, Colo.

COPPER RESERVE MINING & REDUCTION CO.

Office: Salt Lake City. **Officers:** P. S. Keogh, Pres.; J. J. Doolittle, Sec., both of Salt Lake City, Utah. **Inc.:** Aug. 5, 1912. **Capital:** 500,000 shares; par value, 10c.; 400,000 shares issued. **Property:** Humming Bird group; 4 patented claims, Bear Lake dist.; Paris. **Remarks:** Inactive for eight years.

PEGRAM MINING CO.

Office: 310 Colorado Bldg., Denver, Colo. **Officers:** A. O. McMichael, Pres., First National Bank Bldg., Denver, Colo.; J. J. Laton, Sec., 310 Colorado Bldg., Denver, Colo. **Inc.:** Oct. 27, 1917. **Capital:** 10,000 shares; par value, \$1; all shares issued. **Property:** Pegram group; 12 unpatented claims, Bear Lake dist., owned by C. H. Paine, Denver, Colo. **Remarks:** Building a mill (?).

SILVER TIP MINING CO.

Office: Montpelier. **Officers:** A. J. Layland, Pres., Montpelier; John T. French, Sec.-Mgr., Nounan. **Inc.:** March 27, 1922. **Capital:** 5,000,000 shares; par value, 1c.; 3,108,186 shares issued. **Property:** Silver Tip group; 13 unpatented claims, unorganized dist.; Nounan.

U. S. PHOSPHATE CO. OF MICHIGAN

Office: 903 Yeon Bldg., Portland, Ore. **Officers:** David C. Whitney, Pres., Whitney Bldg., Detroit, Mich.; Henry F. Chaney, Sec.-Mgr., 903 Yeon Bldg., Portland, Ore. **Inc.:** Dec. 18, 1915; withdrew from Idaho Nov. 20, 1922. **Capital:** 10,000 shares; par value, \$25; 8460 shares issued. **Property:** Star group, 3 patented claims, Bloomington Canyon; Montpelier. **Remarks:** Idle.

UTAH FERTILIZER & CHEMICAL MFG. CO.

Office: Los Angeles, Cal. **Officers:** F. W. Braun, Pres.; Roy V. Boswell, Sec., both of Los Angeles, Cal. **Inc.:** Jan. 29, 1908. **Capital:** 100,000 shares; par value, \$1; all shares issued. **Property:** 16 patented claims; 2361 acres; unorganized dist.; Georgetown; R. R., Georgetown, 8 miles. **Development:** 9 tunnels, 2 shafts, approximating 1000 ft. **Ore:** Phosphate rock. **Remarks:** Idle.

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BENEWAH COUNTY

The principal mining districts of this county are the Hoodoo and Camas Cove districts lying in the southeast corner near the Latah County line, and the St. Joe district on the St. Joe River east of St. Maries. The principal minerals are copper, silver, gold, lead and zinc. A small amount of prospecting and development work only was done during 1922.

BIG FIVE MINING CO.

Office: St. Maries. **Officers:** F. E. Goude, Pres.-Mgr., Calder; W. F. Sargent, Sec.-Treas., St. Maries. **Inc.:** Sept. 20, 1907. **Capital:** 2,000,000 shares; par value, \$1; 1,124,500 shares issued. **Property:** Big Five group; 7 unpatented claims, St. Joe dist.; 12 miles N. E. of St. Maries. **Development:** Approximately 700 ft. of underground workings. **Ore:** Silver-lead-copper. **Remarks:** Assessment work only.

BUTTE MINING CO.

Office: St. Maries. **Officers:** John Martin Ides, Pres.-Mgr.; G. E. Yenor, Sec., both of St. Maries. **Inc.:** March 27, 1916. **Capital:** 500,000 shares; par value, 50c.; 290,800 shares issued. **Property:** 6 unpatented claims, St. Joe district; St. Maries. **Development:** One tunnel, 163 ft. long. **Remarks:** Assessment work only.

WHITMAN COUNTY IRON CO.

Office: Tekoa, Wash. **Officers:** W. C. Hayward, Pres., Tekoa, Wash.; E. G. Hammer, Vice Pres., Spokane, Wash. **Inc.:** Have never filed in Idaho. **Capital:** 250,000 shares common; par value, \$1; 250,000 shares preferred; par value, \$10; none issued. **Property:** 240 acres held under a royalty agreement, Liberty Butte, Tekoa, Wash. **Ore:** Iron.

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Cedar Creek	Camas Cove	W. I. Hupp et al.	St. Maries
Connelly Bros.	Camas Cove	Connelly Bros.	Tyson
McLean Placer	Camas Cove	C. A. McLean	Santa
Red Boy	Camas Cove	J. E. Hemerway	St. Maries

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BINGHAM COUNTY

The principal mineral resource of this county is the placer gold deposits on the Snake River. The fine gold in these gravel bars received considerable attention during 1922. Two experimental plants were in operation and present plans call for the erection of at least one commercial plant during the coming year. The Willow Creek coal prospects located in the northeastern part of the county were idle. The extensive phosphate beds of southeastern Idaho are exposed in numerous places throughout the eastern border of the county.

MARY LEE GOLD MINING CO.

Office: Gallipolis, Ohio. **Officers:** G. E. Womeldorf, Pres.; J. V. Lee, Sec.-Treas., both of Gallipolis, Ohio. **Inc.:** Jan. 29, 1919. **Capital:** 1,000,000 shares; par value, \$1; 500,000 shares issued. **Property:** 46 acres, patented land. **Ore:** placer gold.

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Eagle Bend Pl.	Snake River	Alma Clough	Pingree
Eldorado Placer	Snake River	Robert Wheeler	Sterling
Oborn & Coler Pl.	Snake River	John Oborn	Blackfoot
Parsons Placer	Snake River	W. G. Parsons	Aberdeen
Snake River Pl.	Snake River	G. E. Campbell	Blackfoot
Woodruff Bend Pl.	Snake River	James G. Walsh	Blackfoot

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BLAINE COUNTY

During 1922 Blaine County enjoyed the greatest mining activity that it has witnessed in over 30 years. This revival was not a boom, but a strong consistent growth stimulated by many new discoveries, new companies entering the county, an increase in the number of prospectors, and a large increase in the ore reserves of the old operating mines, all of which is attracting the attention of the mining public, which is again investigating the many possibilities to be found throughout the vast mineralized sections of the county.

This county, then Alturas, was the first in the state to produce a high grade lead-silver ore, and since the first shipments of 1880 has always been a consistent producer, though somewhat limited during the past few years. In addition to these high grade ores, zinc, gold and copper are widely distributed throughout the county, as well as barytes, bismuth and limestone. Of the latter, barytes is by far the most important, and the prediction made in the 23d annual report that "The large high grade deposits of barytes in the Muldoon and Deer Creek districts, which are lying dormant on account of freight rates and prices, will eventually be opened up and contribute largely to the progress of the mining industry in this county" is coming true. One of the barytes properties located on Deer Creek is involved in litigation, and the other has been purchased by the Bunker Hill & Sullivan M. & C. Co., presumably in anticipation of the construction of the company's zinc smelter at Kellogg. Since acquiring this deposit considerable development work has been done, the ground is being patented, and a shipping lease has been let to a Seattle company which contemplates a substantial production during 1923.

Blaine County offers many opportunities to prospectors and development companies and is one of the few counties in the State where immediate results from new ore are possible. The principal new discoveries during the year are as follows: The Consolidated Mascot Mines Corporation, which is operating at the head of the East Fork of Wood River and developing a group of properties with a good record of past production, exposed a very creditable showing. The Mineral Hill Mining & Milling Company, a new organization, which did not enter the county until late in the fall, has been developing an excellent showing of lead-silver ore. Jack Nelson, who has been working the Homestake group on East Fork, which adjoins the property of the Federal Mining & Smelting Co., encountered a good showing of high grade lead-silver ore. The Colorado Mining & Milling Co., a new entry into Blaine County during 1922, is operating the Compensation group, a good showing of ore was exposed, and one small shipment was made during the year. Floyd Wilson, a farmer, made a small shipment of ore from a ledge he discovered in the vicinity of his ranch. The Plata Corporation, developing the Arizona group which adjoins the Idahoan, made one shipment, installed machinery and started an active campaign. One company operating near Bellevue exposed considerable high grade ore, made two small shipments, and is operating continuously.

The most important event during 1922 was the acquisition of the Homestake group by the Mineral Exploration Co. This company is well financed and is directed by prominent mining engineers. An excellent showing of ore has been developed, and 1923 should witness a new large producer in this county.

The Federal Mining & Smelting Co. maintained capacity production from the Independence group, and in the closing months of the year new ore was exposed which greatly increased the reserves of the company and further proved the persistency of the ore in the Wood River district. The Bunker Hill & Sullivan Mining and Concentrating Co. maintained active development work throughout the year, the results of which have been very encouraging. The entry of this company into Blaine County has contributed largely to the increased interest shown.

Two companies were active in the Muldoon district, one of which, the United Mines Co., operating a property in Garfield Gulch, developed a very creditable showing of high grade lead-silver ore. Other than assessment work the Sawtooth district was dormant during 1922.

AMBRO MINING CORPORATION

Office: 600 W. Pratt St., Baltimore, Md. **Officers:** John H. Mencken, Pres., Baltimore, Md.; John R. Kelly, Mgr., Gannett. **Capital:** 10,000 shares; par value, 10c.; shares issued, unknown. **Property:** Cove group; 7 unpatented claims, Mineral Hill dist.; Gannett. **Development:** 4 tunnels, giving approximately 580 feet on vein, vertical depth. **Plant:** Steam driven compressor on ground, not installed; complete mining equipment. **Ore:** Lead-silver. **Men employed:** One. **Remarks.** Assessment work only.

ARGOSY MINING & MILLING CO., LTD.

Office: Pocatello. **Officers:** George Dash, Pres.; T. B. Smith, Sec., both of Pocatello. **Inc.:** Feb. 24, 1904. **Capital:** 50,000 shares; par value, \$1; all issued. **Property:** Argosy group, 5 patented claims, Little Wood River dist.; Muldoon. **Remarks:** Dormant for 10 years.

BALTIMORE & VICTORIA MINING CO.

Office: Care of U. S. Trust Company, Terre Haute, Ind. **Officers:** William K. Hamilton, Pres., Terre Haute, Ind. **Inc.:** July 3, 1903. **Capital:** 150,000 shares; par value, 10c; all shares issued. **Property:** Baltimore group, 5 patented, 8 unpatented claims, Warm Springs Creek dist.; Hailey. **Remarks:** Property under lease and bond to Federal Mining & Smelting Co., which has been actively engaged in prospecting it throughout the year.

BARYTES RARE MINERALS MFG. CO.

Office: P. O. Box 727, Tacoma, Wash. **Officers:** J. L. Day, Pres., Tacoma, Wash. **Inc.:** June 2, 1921; charter forfeited Dec. 1, 1922. **Capital:** 600,000 shares; 200,000 preferred; 400,000 common; shares issued, unknown. **Property:** High Ore group; 2 patented, 1 unpatented claim, Little Wood River dist.; Muldoon. **Remarks:** Assessment work only on unpatented claim.

BOULDER CREEK MINES, INC.

Office: P. O. Box 1425, Boise. **Officers:** Col. M. W. Wood, Boise. **Inc.:** Nov. 25, 1912. **Capital:** 2,500,000 shares; par value, \$1; 1,580,188 shares issued. **Property:** 3 patented, 21 unpatented claims, Boulder Creek, Warm Springs dist.; Ketchum, 14 miles. **Development:** 20 tunnels, 3 shafts, numerous raises, crosscuts and drifts, totaling approximately 3800 ft. of underground workings. **Ore:** Lead-silver. **Remarks:** Assessment work only.

BUNKER HILL & SULLIVAN MINING & CONCENTRATING CO.

(See Shoshone County)

Officers: F. W. Bradley, Pres., 1022 Crocker Bldg., San Francisco, Cal.; Stanly A. Easton, Mgr., Kellogg; James W. Gwinn, Local Mgr., Hailey. **Property:** Lease and bond on Bullion, Mayflower, Jay Gould, Red Elephant and Red Elephant Consolidated groups, approximately 1000 acres at Bullion, Mineral Hill dist.; Hailey, 7 miles. **Development:** Approximately 8 miles of underground workings in all groups. **Plant:** Electrically driven compressors, complete mining equipment and buildings. **Ore:** Lead-silver. **Men employed:** Average, 14. **Remarks:** The properties being developed by this company are all old producers with a record that runs into many million dollars. Practically all of these mines had been dormant for many years. Active development work was started in 1921 and continued without interruption throughout 1922. This work was directed to find the continuation of the ore bodies that had been lost through faulting. The results have been very encouraging. During 1922 the Bonnie group, on Deer Creek, Mineral Hill district, was purchased and considerable development work was done. These claims contain a deposit of high grade barite, and one carload was extracted and shipped, by a Seattle company, to its grinding plant at San Francisco.

COLORADO MINING & MILLING CO.

Office: Burley. **Officers:** William D. Kenyon, Pres., Burley; William D. Reynolds, Mgr., Hailey. **Inc.:** Jan. 27, 1922. **Capital:** 1,000,000 shares; par value 25c; 460,000 shares issued. **Property:** Compensation group; 16 unpatented claims, owned by L. A. Dithmer, held under lease and bond; Mineral Hill dist.; Hailey. **Ore:** Lead-silver. **Men employed:** Average, 4. **Remarks:** The property held by this company is one of the oldest locations in the county. Active development work was started early in the year; a good showing of ore was developed, and one carload shipped.

CONSOLIDATED MASCOT MINES CORPORATION

Office: 407 Newhouse Bldg., Salt Lake City, Utah. **Officers:** Charles Peter, Pres.-Mgr., 407 Newhouse Bldg., Salt Lake City. **Inc.:** July 6, 1921. **Capital:** 1,000,000 shares; par value \$1; 800,000 shares issued. **Property:** Mascot Mine; 5 patented, 35 unpatented claims, Warm Springs Creek dist.; Hailey. **Development:** 8 tunnels and numerous crosscuts and drifts, approximating 4000 ft. **Plant:** 250 cu. ft. gas driven compressor, 200 k. w. power plant, 500 cu. ft. compressor, semi-Diesel gas engine; sawmill, electric light plant and complete mining equipment. **Ore:** Lead-silver. **Men employed:** Average 50. **Remarks:** During the year the company greatly enlarged its surface equipment; a large bunk and boarding house, power plant and numerous buildings were constructed. Aggressive development of the recently exposed ore in the Lydia tunnel was also maintained, and the two principal tunnels advanced without interruption. These tunnels are each 7x8 feet in the clear and double tracked. The Lydia tunnel is on the east side of the East Fork of Wood River and the Paymaster on the west side. The Lydia has been advanced about 1500 feet, and will be approximately 12,000 feet long when completed.

CONTINENTAL KELLY MINING CO.

Office: Idaho Falls. **Officers:** D. F. Dowd, Pres.-Mgr.; J. J. Hubbell, Sec., both of Idaho Falls. **Inc.:** Jan. 26, 1920. **Capital:** 500,000 shares; par value 20c.; 324,250 shares issued. **Property:** 6 unpatented claims on Kelly Mountain, Mineral Hill dist.; Hailey, 12 miles. **Development:** 2 tunnels: No. 1, 220 ft. long; No. 2, 260 ft. long; total development approximately 600 ft. **Ore:** Lead-silver. **Remarks:** Assessment work only.

DAISY MINING & MILLING CO.

Office: Hailey. **Officers:** C. S. Shephard, Pres.; J. J. Hedrick, Sec., both of Hailey. **Inc.:** July 6, 1920. **Capital:** 500,000 shares; par value \$1; shares issued, none. **Remarks:** Company owns no property.

ERVINE MINING CO.

Office: Ketchum. **Officers:** W. Mayo Payson, Pres., Portland, Maine; C. Fred Howe, Mgr., Ketchum. **Inc.:** March 14, 1922. **Capital:** 1,000,000 shares; par value \$1; 3 shares issued. **Remarks:** No other information available.

EUREKA DEVELOPMENT CO., LTD.

Office: 307 Dooly Blk., Salt Lake City, Utah. **Officers:** W. A. Wilson, Pres.-Mgr., 307 Dooly Blk., Salt Lake City, Utah. **Inc.:** June 28, 1905. **Capital:** 200,000 shares; par value 50c.; all shares issued. **Property:** Eureka group; 4 patented, 5 unpatented claims, Mineral Hill dist.; Hailey, 7 miles. **Development:** 2 tunnels: No. 1, 1100 ft. long; No. 2, 1200 ft. long; 1 vertical shaft, 400 ft. deep; 1 inclined shaft, 435 ft. long. Total development approximately 10,000 ft. **Plant:** MINE: Steam driven hoist. MILL: Steam driven concentrator. **Ore:** Lead-silver. **Men employed:** Average, 2 leasers.

FEDERAL MINING & SMELTING CO.

(See Shoshone County)

Office: Wallace. **Officers:** F. H. Brownell, Pres., 120 Broadway, N. Y.; Frederick Burbidge, Mgr., Wallace; A. E. Ring, Supt., Hailey. **Property:** Independence, North Star, Koeninger, Malta and Baltimore groups; 41 patented, 13 unpatented claims, 838 acres; Baltimore group held under lease and option. All in Warm Springs Creek dist.; Hailey, 12 miles. **Development:** Approximately 6 miles of underground workings, the principal tunnel being the Plummer, or main haulage, which is over 6000 ft. long, and connects the North Star and Independence groups. **Plant:** MINE: One English Iron Works 202 single drum 25 h. p. electric hoist; one Lidgerwood 8x10 air hoist; one I-R 420 cu ft. compressors; one C-P 765 cu. ft. compressor. All electrically driven. Electric haulage through Plummer tunnel. One Waugh drill sharpener and complete mine equipment: 4400 ft. Riblet aerial tram from Plummer tunnel to mill, capacity 20 tons an hour. Shops, timber sheds and bunk houses. MILL: 500-ton concentrator; jaw and gyratory crushers; rolls; Marcy ball mills; Hancock jigs; Drag classifiers; Wilfley tables; Dorr thickeners, Oliver filter; electric power. **Ore:** Lead-silver. **Men employed:** Average, 110. **Remarks:** In addition to maintaining capacity production throughout the year, practically all of which came from the Independence, over 8000 ft. of new development work was done on the Independence and Baltimore groups. This is Blaine county's largest producer and it is adding considerable to the reputation of the county for consistent production.

FIELD MUTUAL MINING CO.

Office: 254 Alder St., Portland, Ore. **Officers:** Al W. Field, Pres.-Mgr.; V. F. Rogers, Sec., both of 254 Alder St., Portland, Ore. **Inc.:** Company has never complied with corporate laws of Idaho. **Capital:** 400,000 shares; par value 25c.; 121,761 shares issued. **Property:** 14 unpatented claims, Kelly Mountain, Mineral Hill dist.; Hailey. **Development:** Approximately 3000 ft. of underground work. **Ore:** Lead-silver. **Remarks:** Assessment work only.

HAILEY BONANZA MINING CO.

Office: Pocatello. **Officers:** Carl Reisig, Pres.-Mgr., Hailey; R. D. Leach, Sec., Pocatello. **Inc.:** Aug. 9, 1919. **Capital:** 500,000 shares; par value \$1; 313,310 shares issued. **Property:** 1 patented, 5 unpatented claims, Greenhorn Gulch, Warm Springs Creek dist.; Hailey. **Development:** Approximately 300 ft. of underground work. **Ore:** Lead-silver. **Remarks:** No other information available.

HOMESTAKE MINES

Partnership. J. J. Donovan, Mgr.; Bellevue. **Property:** 5 unpatented claims, Warm Springs Creek dist.; Ketchum. **Development:** 13 tunnels, principal ones being No. 1, 450 ft. long, No. 2, 410 ft. long, No. 3, 595 ft. long, No. 4, 1000 ft. long, No. 5, 1400 ft. long. Total development approximately 4000 ft. **Ore:** Lead-silver. **Remarks:** This property is one of the principal mines in the Wood River section, and has been an intermittent shipper for many years. During the closing months of the year it was taken over under lease and option by Denver and Salt Lake City interests and the Mineral Exploration Company organized to develop it. The officers of the company are W. H. Webber, President, Denver; F. V. Bodfish, Vice President; Murray Schick, Secretary-Treasurer; and Joseph V. Beeson, Geologist, all of Salt Lake City, Utah. The new company has erected suitable buildings, installed a compressor with complete mining equipment, and has started an extensive development campaign.

IVANHOE MINING CO.

Office: 485 California St., San Francisco, Cal. **Officers:** F. G. Drum, Pres.; Fred T. Elsey, Sec., both of 485 California St., San Francisco, Cal. **Inc.:** July 28, 1909. **Capital:** 2500 shares; par value \$1; all shares issued. **Property:** Durango group; 16 patented claims; Iris group; 5 patented claims, Mineral Hill dist.; Triumph group; 7 patented claims; Warm Springs Creek dist. Durango group under lease and bond to Bunker Hill & Sullivan M. & C. Co.

IDAHO MINERAL PRODUCTS CO., LTD.

Office: Hailey. **Officers:** J. F. MacClure, Pres., Montpelier; J. G. Hedrick, Hailey. **Inc.:** July 6, 1920. **Capital:** 100,000 shares; par value \$100; shares issued none. **Remarks:** Company owns no property.

KANSAS CITY-IDAHO MINING & DEVELOPMENT CO.

Office: 709 Kansas City Life Bldg., Kansas City, Mo. **Officers:** Frank J. Hall, Pres., 1208 Wyandotte St., Kansas City, Mo.; C. W. Morton, Mgr., 709 Kansas City Life Bldg., Kansas City, Mo. **Inc.:** Sept. 30, 1915. **Capital:** 1,000,000 shares; par value \$1; 500,000 shares issued. **Property:** 20 unpatented claims, Lava Creek dist.; Martin. **Development:** Approximately 2500 ft. of underground workings, including 6 tunnels: No. 1, 1100 ft. long; No. 2, 1000 ft. long. **Ore:** Lead-silver, zinc.

LONE PINE MINES CO.

Office: Overland Bldg., Boise. **Officers:** William J. J. Smith, Pres.-Mgr., Hailey; Charles W. Mack, Sec., Overland Bldg., Boise. **Inc.:** March 18, 1922. **Capital:** 1000 shares; par value \$50; 599 shares issued. **Property:** Lease and bond on Lone Pine Tree owned by Henry Warning and George Slates, Mineral Hill dist.; Hailey. **Development:** Approximately 900 ft. of underground workings. **Ore:** Lead-silver.

MIDVALE MINING CO.

Office: Ketchum. **Officers:** W. Mayo Payson, Pres.; C. Fred Howe, Mgr., Ketchum. **Inc.:** March 14, 1922. **Capital:** 1,000,000 shares; par value \$1; 3 shares issued. **Remarks:** No other information available.

MINERAL HILL MINING & MILLING CO.

Office: Hailey. **Officers:** Joe C. Vernon, Pres., Shoshone; Leo M. Bresnahan, Sec., Hailey. **Inc.:** Sept. 21, 1922. **Capital:** 50,000 shares; par value \$1; 30,455 shares issued. **Property:** Lease and bond on Jumbo group; 2 patented claims, Mineral Hill dist.; Hailey. **Plant:** MILL: 10 stamp, concentrating tables, partly dismantled. **Ore:** Lead-silver, gold. **Men employed:** Average, 2. **Remarks:** This is a new company to enter the county during 1922. The property was acquired, development work started, and a good showing of high grade ore exposed.

MINNIE MOORE MINES CO.

Office: Bellevue. **Officers:** I. E. Rockwell, Pres.-Mgr., Bellevue. **Inc.:** June 27, 1912, charter forfeited Dec. 1, 1920. **Capital:** 500,000 shares; par value \$1; 302,000 shares issued. **Property:** Minnie Moore group: 16 patented, 4 unpatented claims, Mineral Hill dist.; Bellevue. **Ore:** Lead-Silver. **Remarks:** The property owned by this company is the famous old Minnie Moore which has a record of having produced over \$8,000,000.

PILGRIM MINES CO.

Office: 308 Overland Bldg., Boise. **Officers:** Edward Schwerd, Pres.-Mgr., 308 Overland Bldg., Boise; J. W. Mehargue, Sec., 329 Yates Bldg, Boise. **Inc.:** Feb. 16, 1921. **Capital:** 1,000,000 shares; par value 5c.; 400,000 shares issued. **Property:** Pilgrim group; 1 patented, 4 unpatented claims, Sawtooth dist.; Obsidian; R. R., Ketchum, 40 miles. **Development:** 3 tunnels: No. 1, 660 ft. long; No. 2, 60 ft. long; No. 3, 80 ft. long. Vertical distance on vein 300 ft.; total development approximately 1200 ft. **Ore:** Silver. **Remarks:** Assessment work only.

PLATA CORPORATION

Office: Aberdeen, Wash. **Officers:** B. H. Bennetts, Pres.-Mgr., 1142 Market St., Tacoma, Wash.; Phil S. Locke, Sec., Aberdeen, Wash.; H. D. Babcock, Supt., Hailey. **Inc.:** Feb. 1, 1922. **Capital:** 100 shares; par value \$100; 90 shares issued. **Property:** Lease and bond on Arizona group, owned by Mrs. Charles Cuneo, Hailey; 1 patented, 10 unpatented claims, Mineral Hill dist.; Hailey. **Development:** Approximately 2000 ft. of underground workings. **Ore:** Lead-silver. **Men employed:** Average, 4. **Remarks:** This company was a new entry into Blaine county during the year; active development work was maintained and considerable high grade ore shipped. A compressor and complete mining equipment was installed during the closing months of 1922 and an active development campaign started. The property held by this company adjoins the Idahoan group, at one time a famous producer.

QUINCY JUNIOR MINING CO.

Office: Salt Lake City, Utah. **Officers:** George L. Erwin, Pres., Consumers' Power Co., Grand Rapids, Mich.; James Farrell, Sec., National Copper Bank, Salt Lake City, Utah. **Inc.:** Dec. 20, 1903. **Capital:** 150,000 shares; par value \$1; 139,658 shares issued. **Property:** Red Elephant group; 11 patented, 1 unpatented claim, Mineral Hill dist.; Hailey. **Development:** Approximately 15,000 ft. underground workings. **Plant:** Old concentrator, jigs and tables. **Ore:** Lead-silver. **Remarks:** Property under lease and bond to Bunker Hill & Sullivan M. & C. Co. which has been actively engaged in developing it throughout the year.

RUBY SILVER MINES CORPORATION

Office: Shane Bldg., Idaho Falls. **Officers:** H. H. Scarborough, Pres.; W. O. Sutherland, Sec., both of Idaho Falls. **Inc.:** Feb. 23, 1918. **Capital:** 1,000,000 shares; par value 1c.; 850,000 shares issued. **Property:** 8 unpatented claims, Trail Creek, Warm Springs Creek dist.; Ketchum. **Development:** Approximately 1200 ft. of underground workings, consisting of 3 tunnels: No. 1, 320 ft. long; No. 2, 310 ft. long; No. 3, 480 ft. long. **Ore:** Lead-silver. **Remarks:** Idle.

SILVER LEAD MINING CO.

Office: Idaho Bldg., Boise. **Officers:** J. H. Richards, Vice Pres., Idaho Bldg., Boise; M. J. Kirkpatrick, Sec., 818 Idaho St., Boise; George Ish, Mgr., Hailey. **Inc.:** July 25, 1916. **Capital:** 200,000 shares; par value \$1; 100,000 shares issued. **Property:** Venture group; 3 patented claims, Mineral Hill dist.; Hailey. **Remarks:** Idle.

SILVER SPAR MINING CO.

Office: Idaho Falls. **Officers:** B. M. Rogers, Pres., Red Lodge, Mont.; Claude Ferguson, Sec., Idaho Falls. **Inc.:** April 14, 1916, as Falls Mining Company, name changed April 28, 1917. **Capital:** 200,000 shares; par value \$1; 100,000 shares issued. **Property:** Little Wood River dist.; Muldoon. **Plant:** Steam driven hoist and compressor, complete mining equipment and camp. **Remarks:** Officers of company unable to submit any further information.

TIGEE MINING CO., LTD.

Office: 612½ Main St., Boise. **Officers:** R. E. Knapp, Pres.-Mgr., 612¾ Main St. **Inc.:** March 21, 1905, charter forfeited Dec. 2, 1918. **Capital:** 50,000 shares; par value \$20; 40,000 shares issued. **Property:** 6 unpatented claims, Boulder Creek, Warm Springs Creek dist.; Ketchum. **Remarks:** Assessment work only.

TORBANEHILL MINING CO.

Office: 611 Deseret Bank Bldg., Salt Lake City, Utah. **Officers:** Oscar W. Moyle, Sec., Salt Lake City, Utah. **Inc.:** Sept. 14, 1906. **Capital:** 500,000 shares; par value 1c.; all shares issued. **Property:** 7 patented claims, Lava Creek dist.; Carey. **Remarks:** Idle for many years.

UNITED MINES CO.

Office: 801 Pittock Blk., Portland, Ore. **Officers:** H. C. Hopkins, Pres.; F. Ure Williams, Sec.; both of 801 Pittock Blk., Portland, Ore.; Thomas F. Bradshaw, Mgr., Muldoon. **Inc.:** April 7, 1922. **Capital:** 1200 shares; par value \$50; 475 shares issued. **Property:** 3 unpatented claims, Garfield Gulch, Little Wood River dist.; Muldoon. **Development:** Approximately 1100 ft. of underground workings, consisting principally of 4 tunnels: No. 1, 800 ft. long; No. 2, 70 ft. long; No. 3, 90 ft. long; No. 4, 70 ft. long. **Plant:** 7x6 I.-R. compressor, driven by 34 in. Pelton water wheel; and complete equipment. **Ore:** Lead-silver. **Men employed:** Average, 3. **Remarks:** Active development work was carried on throughout the year with very encouraging results.

VIENNA CONSOLIDATED MINES & SMELTING CO.

"This is only a prospect; no prospect work or mining has been done since about 1918." Louis A. Hippach, Sec., 400 W. Ohio St., Chicago, Ill.

WAR DANCE MINING CO.

Office: P. O. Box 397, E. Auburn, Cal. **Officers:** James W. Burns, Pres., E. Auburn, Cal. **Inc.:** Sept. 17, 1910. **Capital:** 500,000 shares; par value \$1; 1250 shares issued. **Property:** War Dance group; 23 unpatented claims, Mineral Hill dist.; Hailey. **Development:** Over 10,000 ft. of underground workings. **Remarks:** One of Blaine county's old producers. Assessment work only.

WAVA MINING & MILLING CO.

Office: Hailey. **Officers:** C. E. Gordon, Pres., Indianapolis, Ind.; J. G. Hedrick, Sec., Hailey. **Inc.:** Sept. 18, 1919. **Capital:** 15,000 shares preferred; 35,000 shares common; par value \$1; 4232 preferred; 24,282 common issued. **Property:** Aztec group; 5 unpatented claims, Warm Springs Creek dist.; Ketchum. **Development:** 1 tunnel, 365 ft. long. **Ore:** Lead-silver. **Remarks:** Idle.

NAME OF MINE	MINING DIST.	P. O. ADDRESS	OWNER
Aetna	Minerall Hill	Neil Campbell	Bellevue
Alturas & Scotia	Sawtooth	Frank Becker	Hailey
Amazon	Mineral Hill	Chas Peterlin	Bellevue
Bald Eagle	Mineral Hill	Cecelia J. Thomas	Hailey
Barbara	Mineral Hill	John Utsch	Hailey
Beaver Gr.	Sawtooth	Thos. Mizer, Sr.	Hailey
Ben Landers	Warm Spgs. Cr.	Victor Stolle	Nampa
Big Mint	Mineral Hill	H. R. Plughoff, Est.	Hailey
Black Barb	Mineral Hill	Wm. Black	Bellevue
Black Jack et al.	Mineral Hill	J. Geo. Arkoosh	Bellevue
Blue Bell	Warm Spgs. Cr.	Augustine Johnson	Hailey
Boise City	Mineral Hill	Frank Holtz	Hailey
Bonanza	Mineral Hill	J. L. Van Over	Bellevue
Boyle Mt. Gr.	Warm Spgs. Cr.	C. Fred Howe	Ketchum
Broadway	Warm Spgs. Cr.	Fred Vancil	Hailey
Bull Whacker	Mineral Hill	G. G. Brown	Hailey
Carboniferous	Mineral Hill	Mrs. Frank Campbell	Hailey
Climax	Mineral Hill	Raymond Guyer	Spokane, Wash
Climax Extension	Mineral Hill	Geo. H. Choate	Hailey
Comet Gr.	Mineral Hill	J. Geo. Arkoosh	Bellevue
Con Virginia	Mineral Hill	Mark Aukema	Hailey 405 Hyde Bldg., Spokane, Wash.
Croesus Gr.	Mineral Hill	Fred C. Robertson	Spokane, Wash.
Daisy	Mineral Hill	W. J. Oliver	Hailey
Democrat	Mineral Hill	T. H. Devine	Pueblo, Colo.
Dewey Gr.	Mineral Hill	Fred W. Smith	Hailey
Elkhorn	Warm Spgs. Cr.	Mrs. Horace Lewis	Ketchum
Ellen Stilts	Mineral Hill	W. A. Holland	Hailey
Evelyn	Warm Spgs. Cr.	Hampton & Griffith	Ketchum
Extension	Warm Spgs. Cr.	L. P. McPheters	Ketchum
Free Coinage	Warm Spgs. Cr.	Jas. Bonning Est.	Ketchum
Galena Gr.	Sawtooth	A. C. Martin	Minneapolis, Minn.
Garfield Gulch	Little Wood River	Chas. Norris	Hailey
Gate City	Mineral Hill	A. M. Glahn, Agt.	Bellevue
Gem	Mineral Hill	Elmer Brown	Hailey
Gilt Edge	Mineral Hill	Sarah Campbell	Hailey
Glendale Queen	Mineral Hill	W. D. Scharff	Bellevue
Glengarrif	Mineral Hill	Leo. Snider	Hailey
Grayhound et al.	Warm Spgs. Cr.	H. D. Jones et al.	Hailey
Hard Times	Mineral Hill	Jos. Werry, Jr.	Bellevue
Hill Side	Mineral Hill	John Edwards	Bellevue
Hispanolia	Sawtooth	Chas. H. Furey	Pocatello
Homestake Gr.	Warm Spgs. Cr.	J. A. Nelson	Hailey
Imperial Gr.	Warm Spgs. Cr.	Leo. Snider	Hailey
Jupiter	Little Wood River	E. M. James	Compton, Calif.
Keystone	Warm Spgs. Cr.	Jas. McKelvey	Hailey

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
La Grande	Mineral Hill	Floyd W. Wilson	Hailey
Lake Creek	Warm Spgs. Cr.	Robt. Koeninger	Ketchum
Lark	Mineral Hill	Mrs. A. I. Harris	Bellevue
Last Chance	Warm Spgs. Cr.	P. M. Gray	Ketchum
Les Despencer	Mineral Hill	Mrs. Edw. Flannery	Hailey
Legion Gr.	Warm Spgs. Cr.	Harry Thompson	Boise
Lone Jack	Sawtooth	John T. Garrett	Obsidian
Long Hike	Mineral Hill	Miller & Pearson	Bellevue
Lucky Boy	Sawtooth	H. D. Jones	Hailey
Majestic Gr.	Mineral Hill	Guy U. Lee	Bellevue
Manchuria	Galena	H. D. Jones	Hailey
Minnesota	Warm Spgs. Cr.	Abraham Duquette	Idaho City
Monarch	Little Wood River	Sam Bjornson	Muldoon
Myrtie	Sawtooth	M. O. Duffey Est.	Hailey
Narrow Gauge	Mineral Hill	Eph Daft	Hailey
Nay Aug	Mineral Hill	J. J. Baker	Hailey
New Hope	Warm Spgs. Cr.	W. H. Warfield	Ketchum
New York	Mineral Hill	John Grenfell	Bellevue
O'Neil-Clark Gr.	Mineral Hill	Pat Clark	Hailey
Oriental	Mineral Hill	S. M. Friedman	Hailey
Overland	Mineral Hill	R. B. French	Hailey
Parnell	Mineral Hill	Patrick McMonigle	Hailey
Porto Rico Gr.	Little Wood River	Wm. O'Connor	Muldoon
Prize Taker	Mineral Hill	F. E. Grenfell, Agt.	Bellevue
Queen Bee et al.	Mineral Hill	A. D. Williams	Gooding
Queen Bess	Mineral Hill	Mrs. Jas. McPherson	Hailey
Queen Extension	Mineral Hill	Neil Campbell	Bellevue
Rattler	Mineral Hill	Alex McKibben	Hailey
Red Cloud	Mineral Hill	R. B. French, Agt.	Hailey
Richmond Gr.	Mineral Hill	Jos. Werry, Jr.	Bellevue
Roadside	Mineral Hill	J. S. Shotwell	Gooding
Saint Idloes	Mineral Hill	Chas. Sheehan	Bellevue
Silver Cord Gr.	Warm Spgs. Cr.	Chas. Swanson	Ketchum
Silver Crown	Warm Spgs. Cr.	Mark J. King	Hailey
Silver King	Mineral Hill	A. D. Hunter	Bellevue
Silver King	Sawtooth	F. E. Riddle	Tulsa, Okla.
Silver Knob	Mineral Hill	W. A. Sullivan	Ketchum
Smuggler	Little Wood River	H. L. Watkins	Muldoon
Standard	Warm Spgs. Cr.	R. M. Hayes	Hailey
Star	Mineral Hill	Leo. J. Falk	Boise
Stockholder	Mineral Hill	Ira L. Kilgore	Hailey
Sunbeam	Sawtooth	Chas. H. Furey	Pocatello
Surprise	Little Wood River	F. J. Long	Wendell
Susie S.	Mineral Hill	John Hailey Est.	Boise
Tenbrook et al.	Warm Spgs. Cr.	Alonzo Price, Agt.	Ketchum
Tom Cat	Mineral Hill	Chas. Sonleitner	Hailey
Ute et al.	Warm Spgs. Cr.	F. V. Bodfish	Ketchum
Vindicator Gr.	Warm Spgs. Cr.	W. L. Roller	Hailey
Wheelbarrow	Warm Spgs. Gr.	A. T. Farnlund	Ketchum
Wichita	Warm Spgs. Cr.	J. W. Gailey	Hailey
Wolfstone	Mineral Hill	W. T. Riley	Hailey
Woodrow Wilson	Warm Spgs. Cr.	M. A. Morris	Ketchum

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BOISE COUNTY

Boise County, the principal producer of gold in the State, is essentially a mining county, the gold being found in both placer and lode deposits. Lead, silver and zinc are also widely distributed throughout the county, as well as monazite, which occurs in the placer deposits. Numerous analyses and determinations made by the U. S. Geological Survey and the Smithsonian Institute on the various minerals and metals contained in the black sands from the placer deposits of this county all record a high percentage of monazite and no platinum. Three companies operating placer deposits did hydraulic mining during the high water season. The Gold Hill & Iowa, the largest gold producing mine in Idaho, was active throughout the entire year, excepting while the power plant on Payette River was being rebuilt after it had been destroyed by fire. The Idawa Gold Mining Company and the Monetary Metals Company maintained active development work throughout the year and late in the year the National Mining & Development Company was preparing to resume operations. The activities of 1922 did not meet expectations but the interest shown in new prospecting and new developments far exceeded that of 1921. The principal lead-silver properties are those of the Golden Age Junior Mining Company, which reports a considerable tonnage of ore blocked out and plans completed for the construction of a concentrating mill; the Mineral Mining Company and the Missouri Mining Company, all of which have creditable showings and operated the entire year. The two last named companies each shipped a small amount of ore. The lead-silver deposits, which are widely distributed throughout the county, are destined to become an important factor in its future prosperity.

BIG ENTERPRISE MINING CO.

Office: Boise. **Officers:** S. D. Whaley, Pres., Portland, Ore.; E. Lightfoot, Sec., 1924 Tenth Ave., Ft. Worth, Tex. **Inc.:** June 24, 1915. **Capital:** 8000 shares; par value \$1; 4000 shares issued. **Property:** Noble placer group; 4 unpatented placer claims, Pioneerville dist.; Pioneerville. **Remarks:** Property operated under lease and bond by Mineral Mining Co., which see.

BOISE BASIN IMPROVEMENT CO., LTD.

Office: Idaho City. **Officers:** W. W. Miller, Pres., Franklin, Pa.; E. L. Waddell, Sec., Wheeling, W. Va.; E. F. Blain, Mgr., 1601 N. Twelfth St., Boise. **Inc.:** June 27, 1911. **Capital:** 500,000 shares; par value \$1; 320,170 shares issued. **Property:** Coin Bond group; 34 unpatented claims, 6 of which are held under lease and bond from William G. Ekin, Horseshoe Bend; Placerville dist.; Placerville. **Development:** Thousands of feet of work have been done in this group in the past 35 years. There is an open tunnel 1555 ft. in length with upraise 160 ft. to surface and numerous drifts. **Ore:** Gold, lead-silver. **Men employed:** Average, 3.

BOSTON & IDAHO GOLD DREDGING CO.

Office: 610 Overland Bldg. **Officers:** W. H. Estabrook, Pres., Trinity Center, Cal.; Etheredge Walker, Sec.-Mgr., 610 Overland Bldg., Boise. **Inc.:** Jan. 14, 1899. **Capital:** 50,000 shares; par value \$10; all shares issued. **Property:** 15 patented, 5 unpatented placer claims, Idaho City dist.; Idaho City. **Remarks:** This company has conducted no mining operations for a number of years. It owns and operates a 1600 h. p. hydroelectric plant located on the South Fork of the Payette River at Grimes Pass, the power being distributed throughout the basin to the different mines and towns.

CENTERVILLE MINE & MILLING CO.

Office: 520 Empire Bldg., Boise. **Officers:** Herbert A. Parkyn, Pres., 1224 Marquette Bldg., Chicago, Ill.; S. K. Atkinson, Mgr., 520 Empire Bldg., Boise. **Capital:** 1,000,000 shares; par value \$1; shares issued, unknown. **Property:** 40 unpatented placer claims. **Remarks:** Assessment work only.

COIN BOND MINING CO.

Office: 1601 N. Twelfth St., Boise. **Officers:** Fleming Howell, Pres., Oakland, Md.; E. F. Blain, Mgr., 1601 N. Twelfth St., Boise. **Inc.:** April 11, 1910. **Capital:** 500,000 shares; par value \$1; 458,205 shares issued. **Remarks:** The property of this company has been absorbed by the Boise Basin Improvement Co., Ltd.

CURRY DITCH GOLD PLACER MINES ASSOCIATION.

Office: Pioneerville. **Officers:** P. E. Hall, Jr., Pres.-Mgr., Pioneerville; A. N. Clark, Sec., Everett, Wash. **Inc.:** An association. **Capital:** 500,000 shares; par value unfixed; 48,693 shares issued. **Property:** 4 unpatented placer claims held under lease and bond, Pioneerville dist.; Pioneerville.

DIAMOND L MINING CO., LTD., OF IDAHO

Office: Pioneerville. **Officers:** Lottie Morehead, Pres.-Sec.-Mgr. **Inc.:** July 1, 1918. **Capital:** 500,000 shares; par value 1 mill; 282,220 shares issued. **Property:** Buckskin group; 12 unpatented claims, Pioneerville dist.; Pioneerville. **Development:** Approximately 1500 ft. of underground workings, the most important of which are two tunnels, one 630 ft. long, and the other 290 feet long. **Ore:** Lead-silver-gold. **Men employed:** Average, 2. **Remarks:** A small amount of development work has been carried on throughout the year.

DIVIDEND MINING & MILLING CO.

Office: 700 Idaho St., Boise. **Officers:** J. W. Baker, Pres., 700 Idaho St., Boise; A. E. Clemons, Sec., R. F. D. 5, Box 129A, Boise. **Inc.:** April 5, 1919 as Standard American Mining Company, name changed June 10, 1922. **Capital:** 400,000 shares par value 25c; 289,417 shares issued. **Property:** Dividend group; 7 unpatented claims on Smith Creek, Idaho City dist.; Boise. **Development:** One tunnel 80 ft. long.

FEDERAL EXPLORATION GOLD MINE CORPORATION

Office: 1104 Highland Bldg., Pittsburgh, Pa., **Officers:** W. A. Frick, Pres., 1104 Highland Bldg., Pittsburgh, Pa. **Inc.:** May 9, 1922. **Capital:** 300,000 shares; par value \$1; 200,572 shares issued. **Property:** Sterling group; 16 unpatented claims, Idaho City dist.; Idaho City. **Development:** One tunnel 1800 ft. long. **Plant:** 20 h. p. C-P gas driven compressor.

GOLD DREDGING & POWER CORPORATION

Office: 501 Empire Bldg., Boise. **Officers:** Frank E. Johnesse, Pres.; S. K. Atkinson, Mgr., both 501 Empire Bldg., Boise. **Inc.:** Jan. 30, 1922. **Capital:** 1,500,000 shares; par value \$1; 2500 shares issued. **Remarks:** On May 12, 1922, this company had a lease and bond on all the property owned by the Boston & Idaho Gold Dredging Co. and the Centerville Mining & Milling Co.

GOLDEN AGE JUNIOR MINING CO.

Office: 408 Capital National Bank Bldg., Lansing, Mich. **Officers:** F. M. Seibley, Pres., Los Angeles, Cal.; F. B. Le Clear, Sec.-Treas.-Mgr., Lansing, Mich. **Inc.:** April 19, 1915. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** Golden Age group; 18 patented claims. Pioneerville dist.; Pioneerville. **Development:** 3 tunnels; No. 1, 2000 ft. long; No. 2, 500 ft. long; No. 3, 360 ft. long. 1 vertical shaft, 275 ft.; total development, approximately 3000 ft. **Plant:** MINE: Steam driven hoist, electrically driven

compressor, complete mining equipment. **MILL:** 2 mill buildings, including stamp concentrating and cyanide equipment. **Ore:** Gold-silver. **Men employed:** Average, 30. **Remarks:** This company has been actively engaged in developing its property throughout the year. Considerable ore amenable to concentration has been developed and during the closing months of the year plans were completed for the erection of a concentrating mill.

GOLD HILL & IOWA MINES CO.

Office: Quartzburg. **Officers:** Etheredge Walker, Pres.-Mgr., 610 Overland Bldg., Boise. **Inc.:** June 10, 1908. **Capital:** 200,000 shares; par value \$10; 194,622 shares issued. **Property:** Gold Hill group; 19 patented, 26 unpatented claims. **Development:** 600 ft. 3 compartment vertical shaft and approximately 30,000 ft. of underground workings. **Plant:** MINE: 52 h. p. hoist and 452 cubic ft. compressor, both electrically driven. **MILL:** 150 to 200 ton, including crusher, rolls, Harding ball mill, amalgamating plates, concentrating tables, regrinding tube mill and cyaniding of concentrates in Pachuca tanks, zinc box precipitation. **Ore:** Gold. **Men employed:** Average, 75. **Remarks:** This mine is the largest and most consistent gold producer in the state. It is well equipped with complete mining and milling plants; company store, buildings, bunk and boarding houses. During December the mine was closed down, but the pumps are still running to keep the mine unwatered. This property was first located in 1861, since which time it has been in practically continuous operation with a production record of approximately \$5,000,000, half of which was produced during the last 14 years. The mine and mill is fully described with illustrations in "Ore deposits of Gold Hill mine, at Quartzburg, Idaho," by A. J. McDermid: Eng. & Min. Jour.-Press, Sept. 23, 1922, to which the reader is referred.

HALLEY PLACERS

Office: Placerville. **Officers:** E. F. Blain, Mgr., 601 N. Twelfth St., Boise. **Inc.:** An association. **Property:** Halley Placers; 7 unpatented placer claims, Placerville dist.; Placerville. **Remarks:** Property owned jointly with Boise Basin Improvement Company.

IDAHO DEVELOPMENT CO.

Office: 610 Overland Bldg., Boise. **Officers:** Etheredge Walker, Pres.-Mgr., 610 Overland Bldg., Boise. **Inc.:** Dec. 16, 1920. **Capital:** 100 shares; par value \$100; all shares issued. **Property:** Edna group; Banner dist.; Centerville Placer group; Placerville dist.; 6 patented, 8 unpatented claims.

IDAHO HYDRAULIC CORPORATION

Office: Nampa. **Officers:** Melvin T. Rowland, Pres.-Mgr., Nampa. **Inc.:** Feb. 22, 1922. **Capital:** 1,000,000 shares; par value \$1; 500 shares issued. **Property:** Lease and bond on Kempner ranch and 30 unpatented claims.

IDAWA GOLD MINING CO.

Office: 526 Idaho Bldg., Boise. **Officers:** H. R. Freitag, Pres., Max, N. Dak.; R. Vold, Sec., Regan, N. Dak.; L. S. Honstead, Mgr., Boise. **Inc.:** Jan. 3, 1919. **Capital:** 2,000,000 shares; par value 25c; 916,636 shares issued. **Property:** Belshazzar group; 15 unpatented claims, Quartzburg dist.; Quartzburg. **Development:** 5 tunnels: No. 1, 500 ft. long; No. 2, 600 ft. long; No. 3, 700 ft. long; No. 4, 130 ft. long; No. 5, 2400 ft. long. Total development, approximately 4300 ft. **Plant:** 175 cu. ft. C-P compressor, electrically driven, complete mining equipment. **Ore:** Gold-silver. **Men employed:** Average, 5. **Remarks:** The company has been actively engaged in the extension of its lower tunnel, No. 5, throughout the year.

MINERAL DEVELOPMENT CO.

Office: Boise. **Officers:** E. F. Blain, Pres., Boise. **Inc.:** Jan. 14, 1922. **Capital:** 5000 shares; par value \$100; 1520 shares issued. **Property:** American Girl group; 8 patented placer claims, held under lease from Louise D. Steward.

MINERAL MINING CO.

Office: Placerville. **Officers:** A. C. Gallupe, Pres.-Treas.; E. A. Gallupe, Sec., both of Placerville. **Inc.:** Feb. 6, 1920. **Capital:** 2,500,000 shares; par value 6c.; 738,371 shares issued. **Property:** Enterprise and Smuggler groups; 6 patented, 8 unpatented claims; Enterprise group held under lease and bond from C. B. Lightfoot, Fort Worth, Texas; Pioneerville dist.; Pioneerville. **Development:** Approximately 6000 ft. of underground workings. **Plant:** 25 h. p. steam driven hoist, complete mining equipment. **MILL:** Partly dismantled concentrator built in 1915, and a small water driven test plant consisting of stamps and jigs. **Ore:** Lead-silver-zinc. **Men employed:** Average, 6. **Remarks:** During the year a small testing plant was constructed, active development work was maintained and a small amount of high grade lead concentrates shipped.

MISSOURI MINING CO., LTD.

Office: Pioneerville. **Officers:** I. V. Howard, Pres.; Ezra E. Howard, Sec., both of Pioneerville. **Inc.:** Feb. 4, 1914. **Capital:** 50,000 shares; par value \$1; all shares issued. **Property:** 9 unpatented claims, Pioneerville dist.; Pioneerville. **Development:** Approximately 350 ft. of underground workings. **Ore:** Lead-silver-zinc. **Men employed:** Average, 2. **Remarks:** This property is being operated by the owners. A small amount of high grade lead-silver ore was shipped during the year.

MONETARY METALS CO.

Office: 501 Empire Bldg., Boise. **Officers:** Frank E. Johnesse, Pres.-Mgr.; L. W. Thraikill, Sec., both 501 Empire Bldg., Boise. **Inc.:** March 21, 1921. **Capital:** 1,500,000 shares; par value \$1; 533,901 shares issued. **Property:** Washington and Subrosa groups; 17 unpatented claims, Gambrinus dist.; Idaho City. **Development:** Approximately 3700 ft. of old workings and a new tunnel which the company started during 1921 and which they extended to approximately 1600 ft. in length during the year. **Plant:** MINE: Steam driven compressor and electric light plant. Complete mining equipment. **MILL:** 10 stamp mill, steam driven, built about 1903. **Ore:** Gold-silver. **Men employed:** Average, 12. **Remarks:** This company has been actively engaged in extending the lower tunnel which will be 3000 ft. in length when completed.

MOORE'S CREEK BOULDER GOLD DREDGING CO.

Office: 208 Sonna Bldg., Boise. **Officers:** Stephen M. Smith, Pres.-Mgr., 452 Thatcher St., Boise; Mrs. M. Mayfield, Sec., 1103 N. 5th St., Boise. **Inc.:** June 19, 1912. **Capital:** 425,000 shares; par value \$1; 353,611 shares issued. **Property:** 8 unpatented placer claims on Moore's Creek, Boise. **Plant:** Partly completed dredge; 5½ cu. ft. buckets; 84 ft. bucket line; pumps, aerial cable system; and concentrators, electrically driven. **Men employed:** Average, 2. **Remarks:** Company also owns the Highland Dam power plant from which power is transmitted 8 miles to the dredge.

NATIONAL HYDRAULIC MINES CO.

Office: 1306 E. Jefferson St., Boise. **Officers:** Albert E. Small, Pres.-Mgr., Boise; W. S. Walker, Sec., 1306 E. Jefferson St., Boise. **Inc.:** Sept. 7, 1921. **Capital:** 100,000 shares; par value \$1; shares issued, unknown. **Property:** 3 unpatented placer claims, 340 acres on Moore's Creek, held under lease and bond, Idaho City dist.; Idaho City. **Plant:** Three No. 2 and one No. 1 giants; 3000 ft. of pipe line and complete hydraulic equipment. **Men employed:** Average, 5.

NATIONAL MINING & DEVELOPMENT CO., LTD.

Office: Placerville. **Officers:** A. C. Gallupe, Pres.-Mgr.; E. A. Gallupe, Sec., both of Placerville. **Inc.:** Sept. 23, 1911. **Capital:** 1,000,000 shares; par value \$1; 463,455 shares issued. **Property:** Mountain Chief group; 11 unpatented claims, Quartzburg dist.; Placerville. **Development:** 5 tunnels, the lower, or No. 5, being 2300 ft. long, giving a depth of 600 ft. on the vein. Total development approximately 8000 ft. **Plant:** MILL: All slime cyanide. **Ore:** Gold-silver. **Remarks:** This property is one of the old early day producers. All work done in recent years has been devoted to the extension of No. 5 tunnel.

PRECIOUS METALS CORPORATION

Office: 501 Empire Bldg., Boise. **Officers:** S. K. Atkinson, Pres.; L. W. Thraikill, Sec.; Frank E. Johnesse, Mgr., all of 501 Empire Bldg., Boise. **Inc.:** March 30, 1922. **Capital:** 1,000,000 shares; par value \$1; 31,080 shares issued. **Property:** Boulder and Forest King groups; 2 patented, 9 unpatented claims owned by Pat Moriarty, Idaho City, Gambrinus dist.; Idaho City. **Development:** Total development approximately 5200 ft. **Plant:** 20 stamp mill including concentration, water power, complete equipment. **Ore:** Gold. **Remarks:** This corporation took possession of the property on May 31, 1922. The office has been advised that the lease and bond has been forfeited and that the company is no longer in possession.

REID PLACERS

Officers: E. S. Robinson, Mgr., Placerville. **Property:** 19 unpatented placer claims. **Plant:** 2000 ft. of pipe line; No. 3 giant and complete hydraulic equipment. **Ore:** Gold. **Men employed:** Average, 3.

WASHOE MINING CO.

Office: 610 Overland Bldg., Boise. **Officers:** Etheredge Walker, Pres.-Mgr., Boise. **Inc.:** Dec. 16, 1911. **Capital:** 100,000 shares; par value \$1; all shares issued. **Property:** Banner group; 7 unpatented, 15 unpatented claims, Banner dist.; Idaho City. **Development:** 2 tunnels, the principal one of which is 4000 ft. long. **Plant:** 30-ton mill, tables and flotation. **Ore:** Silver. **Remarks:** Idle.

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Ashcroft Placer	Placerville	H. Ashcroft	Placerville
Blackbird	Pioneerville	Exta Lightfoot	Pioneerville
Bluebird et al.	Banner	G. R. Moland	Boise
Blue Rock	Quartzburg	Allen B. Eaton	Boise
Boston Girl	Placerville	Wm. W. Thorn	Centerville
	Pioneerville	J. D. Branson, Jr.	Pioneerville
Brockmiller	Idaho City	N. Brockmiller	Idaho City
Bummer Hill	Quartzburg	H. C. Granger	Centerville
Cash Register	Placerville	Frank H. Cooper	Centerville
Champion et al.		Geo. A. Williams	Box 594, Boise
Chance Gr.		W. H. Van Meter	Elks' Club, Chicago, Ill.
Clarence et al.	Pioneerville	Wm. Garrecht	Pioneerville
Claude Marsh	Summit Flat	Edward Brisbin	616 S. 17th St., Boise
Clay Gulch	Placerville	J. T. Blair	Centerville
Cleopatra et al.	Pioneerville	Skidmore & McDonald	Pioneerville
Coon Dog	Pioneerville	C. C. Fairchild	Placerville
Cold Springs	Idaho City	O. F. Sibley	1514 Jefferson St., Boise
Elkhorn	Gambrinus	Lippincott & Warner	Idaho City

MINING INDUSTRY OF IDAHO

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Elkmeat	Idaho City	Chas. E. Clark	Soldiers' Home, Boise
Fall Creek	Placerville	Albert Elster	Placerville
Franklin	Idaho City	H. A. Schlosser	Idaho City
Gambrinus	Gambrinus	V. A. Thorn	Idaho City
Gem of the Mtns.	Placerville	C. C. Fairchild	Placerville
Gold Coin	Gambrinus	M. L. Phelps	Idaho City
Gold Dollar	Summit Flat	James H. Hawley	Boise
Gold Sand et al.	Idaho City	Henry Hoslmeier	Idaho City
Golden Seal	Unorganized	Jas. Curtin	905 Idaho St., Boise
Grant Gr.	Idaho City	John Jamieson	Idaho City
Grooms Placer	Payette River	James L. Tyson	Banks
Hard Times	Unorganized	C. M. Hunt	Twin Springs
Hawk	Idaho City	G. W. Casner	Idaho City
Hay Fork	Gambrinus	H. R. Jarvis	Idaho City
Hilltop	Quartzburg	Louis Klein	Grand Hotel, Boise
Illinois	Idaho City	Abraham Duquette	Idaho City
Independence	Pioneerville	Roy Wells	Pioneerville
J. S.	Pioneerville	Mitchell Jeannot	Grimes Pass
Kentuck	Placerville	John Golden	Centerville
King Lead	Pioneerville	A. E. Yoder	Sunnyside
Last Chance et al.	Quartzburg	Frank Daly	Quartzburg
Leary & Brogan	Placerville	Michael Leary	Placerville
Lucky Boy	Gambrinus	Frank Baxter	Idaho City
Mammoth	Pioneerville	Henry Carlson	Pioneerville
Mary Lee	Quartzburg	A. C. Graupner	1010 Ninth St., Lorain, Ohio
Mayflower	Quartzburg	Stephen Mackin	Placerville
Milwaukee	Unorganized	Fletcher Cullen	Cascade
Nally Placers	Pioneerville	Stephen Nally	Pioneerville
New York	Gambrinus	D. R. Morgan	Idaho City
Nighthawk	Pioneerville	John W. Miller	Pioneerville
Olympia	Summit Flat	T. R. Berry	701 E. Jefferson St., Boise
Ophir & Ophir 2	Pioneerville	Peter Reichert	Pioneerville
Paul's Gulch et al.	Pioneerville	Andrew Hansen	Pioneerville
Pioneer	Quartzburg	P. J. Evans	Quartzburg
Reid Placers	Placerville	E. S. Robison	Placerville
Riley & Farren	Placerville	J. J. Brogan	Placerville
St. Clair Gr.	Pioneerville	Damien Adder	Placerville
Saunders	Placerville	W. F. Hiatt	Placerville
17 Placer et al.	Placerville	Lee Bunch	Boise
Sniveley Placer	Centerville	H. C. Granger	Centerville
Standby Placer	Placerville	August Michelson	Beaverton, Ore
Stanton Gulch	Placerville	John Stanton	Placerville
Swede Gulch et al.	Pioneerville	Carlo Poncia	Centerville
Traderville	Idaho City	J. H. Eggers	Idaho City
Warm Springs	Idaho City	Frank Long	Idaho City
Wood Gr.	Quartzburg	S. T. Schreiber	Boise

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BONNER COUNTY

March 23, 1922, is a memorial date for Bonner County, as on that day the first carload of concentrates was shipped from the Armstead mine, thus bringing to a successful termination one of the most remarkable developments in the State and one that put Bonner in a prominent place as a mineral producing county. This achievement is also remarkable in that it is a complete demonstration of the results of intelligent mine management as well as of the possibilities of the county. The Armstead success has also been a very material factor in attracting attention to this county which has resulted in a very large increase in prospecting, development and new companies. The mineral possibilities are holding up under development and with the many new undertakings at present under way the future is indeed very bright. The principal minerals which are distributed throughout the county are high grade silver-copper, lead-silver, zinc, gold and limestone. These deposits offer many opportunities to prospectors and development companies as much of the ore can be shipped without treatment.

The Clark Fork section whose principal ores are lead-silver and copper-silver had a very marked increase in activity over that of 1921. One company was active in developing its copper prospect. The Lawrence Mining & Milling Co. was operated by leasers and the Mimetite group, which adjoins the Lawrence, made its initial shipment.

A large amount of prospecting and some development work was done in the Cabinet section with very encouraging results.

The Priest Lake district showed a very marked increase in activities both prospecting and development. Very encouraging new discoveries were made, and more interest was shown.

The Lakeview district was much more active than in 1921; a large amount of development work was done, and some prospecting, and a small amount of ore was shipped. One company, the Lakeview Silver Mines Co., is contemplating the erection of a reduction plant. After many years of litigation the Idaho Supreme Court has returned the Webber property to its original status. This property is now under investigation and in all probability 1923 will show this old producer again on the active list.

The Pend d'Oreille district has had a marked increase in activity with one company operating and a number of prospectors busy.

The growth in Bonner County has been slow but steady. All of the districts offer many possibilities and it should be but a short time until this county is recognized as one of the principal mining counties of the State.

AMERICAN EAGLE MINING CO.

Office: Sandpoint. **Officers:** R. A. Martin, Pres., Martinsdale, Mont.; H. L. Thomason, Sec.; James A. Evans, Mgr., both of Sandpoint. **Inc.:** May 28, 1919. **Capital:** 10,000 shares; par value \$100; 769 shares issued. **Property:** American Eagle group; 7 unpatented claims, Pend d'Oreille dist.; Sandpoint. **Development:** 1 tunnel, 1500 ft. long which is principally a drift on the vein. **Ore:** Lead-silver. **Men employed:** Average, 2. **Remarks:** This company has been actively engaged in developing its property throughout the year and has opened the vein to a creditable showing in a number of places.

ARGUS MINING CO.

Office: Whitehall Hotel, Cleveland, Ohio. **Officers:** Daniel Meyers, Pres.; George B. Hoyt, Sec., both of Whitehall Hotel, Cleveland, Ohio. **Inc.:** April 20, 1917. **Capital:** 800,000 shares; par value \$1; 500,000 shares issued. **Property:** Vulcan group; 5 unpatented claims, Lakeview dist.; Lakeview. **Development:** 4 tunnels, approximately 800 ft. in length. **Ore:** Lead-silver. **Remarks:** Assessment work only.

AUXER GOLD MINES

Office: Hope. **Officers:** James Campbell, Pres.-Mgr., Hope. **Inc.:** June 24, 1920. **Capital:** 500,000 shares; par value \$1; 168,763 shares issued. **Property:** Boston group; 9 unpatented claims, Pend d'Oreille dist.; Hope. **Development:** Approximately 700 ft. of underground workings, the principal one of which is a tunnel 550 ft. long. **Ore:** Gold. **Men employed:** Average, 5.

BIG FIVE MINING CO.

Office: Hope. **Officers:** Eurl Eagan, Pres.; Earl Eagan, Sec., both of Hope. **Inc.:** June 10, 1910. **Capital:** 1,500,000 shares; par value \$1; 1,079,852 shares issued. **Property:** Big Five group; 7 unpatented claims, Pend d'Oreille dist.; Hope.

BRITANNIA MINING CO.

Office: Priest River. **Officers:** A. O. Kendall, Pres.; M. W. McLean, Sec., both of Priest River. **Inc.:** Nov. 8, 1912. **Capital:** 1,000,000 shares; par value, \$1; 770 shares issued. **Property:** Britannia group; 6 unpatented claims, Priest Lake dist.; Priest River. **Remarks:** Assessment work only.

CAMP BIRD MINING & DEVELOPMENT CO.

Office: Sandpoint. **Officers:** J. W. Lloyd, Pres.-Mgr., 903 Knox Ave., Spokane, Wash.; E. E. Boies, Sec., Sandpoint. **Inc.:** Aug. 21, 1911. **Capital:** 1,500,000 shares; par value \$1; 1,155,666 shares issued. **Property:** Camp Bird group; 7 unpatented claims, Priest Lake dist.; Priest River. **Development:** 2 tunnels; No. 1, 700 ft. long; No. 2, 200 ft. long. Vertical distance between tunnels, 300 ft.

CARPIE MINING CO.

Office: Cabinet. **Officers:** J. W. Powell, Pres.-Mgr.; I. E. Martin, Sec., both of Cabinet. **Inc.:** An associaton. **Capital:** 750,000 shares; par value \$1; 300,000 shares issued. **Property:** Carpie group; 4 unpatented claims, Pend d'Oreille dist.; Cabinet. **Development:** 300 ft. vertical shaft with 4 levels open and approximately 1100 ft. of drifting. **Plant:** Ottumwa. 5x7 hoist; 9x10 Sullivan compressor, both steam driven; complete mining equipment and buildings. **Ore:** Copper.

COPPER GIANT MINING CO.

Office: Clark Fork. **Officers:** W. W. VonCanon, Pres., Sandpoint; H. F. Thibadeau, Sec.-Treas., Clark Fork. **Inc.:** Oct. 10, 1908. **Capital:** 1,500,000 shares; par value \$1; 1,197,151 shares issued. **Property:** Copper Giant group; 8 patented, 1 unpatented claim, Pend d'Oreille dist.; Clark Fork. **Development:** Approximately 1500 ft. of underground workings. **Ore:** Copper-silver.

EMPIRE TUNGSTEN MINING CO.

Office: Evanston, Ill. **Officers:** Frank G. Forbes, Pres., 722 Sherman Ave., Evanston, Ill.; George S. Smith, Sec., 922 Main St., Evanston, Ill. **Inc.:** March 20, 1914. **Capital:** 1,500,000 shares; par value 1c.; shares issued, none. **Property:** Rainbow group, Lakeview dist.; Lakeview.

GREEN MONARCH MINING & MILLING CO., LTD.

Office: Sandpoint. **Officers:** L. H. Jeannot, Pres.-Mgr., Dixon, Mont.; Peter Johnson, Sec., Sandpoint. **Inc.:** July 3, 1905. **Capital:** 1,500,000 shares; par value \$1; 1,408,666 shares issued. **Property:** 11 unpatented claims, Pend d'Oreille dist.; Hope.

IDAHO GOOD HOPE MINING CO., LTD.

Office: Grand Forks, N. Dak. **Officers:** G. L. Elken, Pres., Mayville, N. Dak.; Samuel Forgerson, Sec., Grand Forks, N. Dak. **Remarks:** Officers unable to submit further information.

KANIKSU MINING CO.

Office: Priest River. **Officers:** Chas. W. Beardmore, Pres., Priest River; Dr. Earl H. Current, Sec., Spokane, Wash.; J. W. Lloyd, Mgr., 903 Knox Ave., Spokane, Wash. **Inc.:** Sept. 16, 1922. **Capital:** 100,000 shares; par value \$1; shares issued, none. **Property:** Wood Rat group; 4 unpatented claims, Priest Lake dist.; Priest River. **Development:** Approximately 300 ft. of underground workings, principally 2 shafts; one an incline 150 ft. deep. **Plant:** Steam driven hoist and complete hand mining equipment. **Ore:** Lead-silver. **Men employed:** Average, 2.

LAKE SHORÉ MINING & MILLING CO., LTD.

Office: Midas. **Officers:** D. M. Garrison, Pres.-Mgr., Midas. **Inc.:** Sept. 15, 1906. Charter forfeited: Dec. 1, 1920. **Capital:** 480,000 shares; par value \$1; shares issued, unknown. **Property:** 1 patented claim, Pend d'Oreille dist.; Midas.

LAKEVIEW SILVER MINES CO.

Office: 1208 Old Nat. Bank Bldg., Spokane, Wash. **Officers:** Henry Gallant, Pres., 1416 Market St., St. Louis, Mo.; Cecil G. Fennell, 810 Boatsmens Bank Bldg., St. Louis, Mo.; G. C. Cunningham, Mgr., Lakeview. **Inc.:** Aug. 7, 1919. **Capital:** 1,000,000 shares; par value \$1; 750 shares issued. **Property:** Conjecture group; 2 patented, 7 unpatented claims, Lakeview dist.; Lakeview. **Development:** 3 tunnels; No. 1, 500 ft. long; No. 2, 300 ft. long; No. 3, 1150 ft. long; 1 inclined shaft 220 ft. long. Total development approximately 3700 ft. of underground workings. **Ore:** Lead-silver. **Men employed:** Average, 4. **Remarks:** During 1922 the shaft was completed to its present depth, over 500 ft. of drifting on the lower levels completed, experiments conducted on ore to prove proper metallurgical process and plans completed for the construction of a fine grinding flotation mill.

LAWRENCE MINING & MILLING CO., LTD.

Office: Palouse, Wash. **Officers:** G. Z. Ickes, Pres.; N. B. Humsperger, Sec.-Treas., both of Palouse, Wash. **Inc.:** Oct. 10, 1907. **Capital:** 1,500,000 shares; par value 5c.; 1,454,665 shares issued. **Property:** Lawrence group; 9 unpatented claims, Pend d'Oreille dist.; Clark Fork. **Development:** Approximately 4000 ft. of underground workings. **Plant:** MINE: Water driven compressor, complete mining equipment. MILL: 50-ton concentrator; crushers, 2 set rollers, 2 jigs, 3 tables. **Ore:** Lead-silver. **Remarks:** Property operated by leasers throughout the year.

LUCKY STRIKE MINING CO.

Office: Clark Fork. **Officers:** W. W. Webb, Pres.-Mgr., Clark Fork. **Inc.:** Oct. 25, 1913. **Capital:** 1,000,000 shares; par value \$1. **Property:** Lucky Strike group; 8 unpatented claims, Pend d'Oreille dist.; Clark Fork. **Development:** 2 tunnels; No. 1, 200 ft. long; No. 2, 40 ft. long. **Plant:** Gardner-Ricks compressor; 30 h. p. water wheel; 20 h. p. F-M gas engine.

MORNING STAR MINES, INC.

Office: Sandpoint. **Officers:** J. B. Gardner, Pres.; G. H. Martin, Sec., both of Sandpoint. **Inc.:** Aug. 7, 1922. **Capital:** 500,000 shares; par value 5c.; 7 shares issued. **Property:** 360 acres under purchase agreement from State of Idaho, Pend d'Oreille dist.; Hope. **Development:** 1 tunnel, 140 ft. long. **Ore:** Copper. **Men employed:** 2. **Remarks:** A new company which took over the Hope M. & M. Co.'s property and organization.

NEW YORK MOUNTAIN CHIEF CONSOLIDATED MINING CO.

Office: Priest River. **Officers:** Chas. W. Beardmore, Pres.-Mgr.; Mrs. Mabel Young, Sec., both of Priest River. **Inc.:** July 27, 1903. **Capital:** 2,500,000 shares; par value \$1; 2,328,466 shares issued. **Property:** Mountain Chief group; 10 unpatented claims, Priest Lake dist.; Coolin. **Development:** Approximately 1000 ft. of underground workings, the principal of which is a tunnel 750 ft. long. **Ore:** Lead-silver.

NICKEL PLATE MINING CO.

Office: Spokane, Wash. **Officers:** N. J. Bostwick, Pres., Hillyard, Wash.; Chas. F. Cowan, Sec., Spokane, Wash. **Inc.:** July 21, 1918. **Capital:** 2,000,000 shares; par value \$1; 1,528,989 shares issued. **Property:** Nickel Plate group; 16 unpatented claims, Priest Lake dist.; Nordman. **Development:** 3 tunnels; No. 1, 65 ft. long; No. 2, 600 ft. long; No. 3, 300 ft. long; one inclined shaft, 90 ft. long. Total development approximately 1100 ft. **Plant:** Steam driven compressor; saw mill and complete mining equipment. **Ore:** Copper. **Men employed:** Average, 2.

OPPORTUNITY MINING CO.

Office: 406 Eiler Bldg., Spokane, Wash. **Officers:** M. A. Krantz, Pres.; M. R. Odegaard, Sec., both of 406 Eiler Bldg., Spokane, Wash. **Inc.:** Aug. 18, 1919. **Capital:** 1,500,000 shares; par value 5c.; 803,460 shares issued. **Property:** 8 unpatented claims, Pend d'Oreille dist.; Sagle. **Development:** Approximately 1400 ft. of underground workings, consisting of 6 tunnels and 5 shafts. **Plant:** Steam driven compressor, complete mining equipment and camp. **Ore:** Lead-silver. **Men employed:** Average, 1.

PACKSADDLE MINING CO.

Office: 418 Fernwell Bldg., Spokane, Wash. **Officers:** T. W. Whalen, Pres.-Mgr., Granite Creek. **Inc.:** Feb. 19, 1909. **Capital:** 1,500,000 shares; par value 10c.; 700,000 shares issued. **Property:** Whalen group; 6 unpatented claims, Pend d'Oreille dist.; Granite Creek. **Development:** 3 tunnels; No. 1, 600 ft. long; No. 2, 175 ft. long; No. 3, 180 ft. long. Vertical distance between Nos. 2 and 3, 600 ft. **Ore:** Lead-silver. **Men employed:** One.

PONDERAY MINING & SMELTING CO.

Office: 922 Old National Bank Bldg., Spokane, Wash. **Officers:** W. J. Beaton, acting Sec.-Treas., Spokane, Wash. **Inc.:** April 29, 1914. **Capital:** 5000 shares; par value \$100; all shares issued. **Property:** Venezuela group; 4 patented claims, Lakeview dist.; Lakeview. **Remarks:** Property owned by this company was sold under mortgage foreclosure during the year and smelter dismantled and torn down.

SILVER HILL MINING CO.

Office: Tacoma, Wash. **Officers:** John Harber, Pres., 1011½ A St., Tacoma, Wash.; H. B. Chamberlain, Sec., Tacoma, Wash. **Inc.:** March 6, 1918. **Capital:** 1,500,000 shares; par value 10c; shares issued, unknown. **Property:** Silver Hill group; 5 unpatented claims, Pend d'Oreille dist.; Sagle. **Development:** Approximately 2000 ft. of underground workings. **Ore:** Silver-copper. **Men employed:** Average, 2.

SILVER MOUNTAIN MINING CO.

Office: Sandpoint. **Officers:** John T. Elsasser, Mgr., Sandpoint. **Inc.:** July 24, 1909. **Capital:** 1,500,000 shares; par value 10c.; shares issued, unknown. **Property:** Silver Mountain group; 6 unpatented claims, Priest Lake dist.; Priest River. **Development:** 2 tunnels: No. 1, 400 ft. long; No. 2, 575 ft. long. **Ore:** Lead-silver. **Remarks:** Lower tunnel extended about 70 ft. during the year.

TALACHE MINES, INC.

Office: Talache. **Officers:** A. H. Burroughs, Pres.; H. L. Brown, Sec., both of 200 Fifth Ave, New York; A. H. Burroughs, Jr., Mgr., Talache. **Inc.:** April 21, 1917, as Armstead Mines, Inc.; name changed June 8, 1922. **Capital:** 1,600,000 shares; par value \$1; 1,575,233 shares issued. **Property:** Armstead Mine; 18 patented, 43 unpatented claims, Pend d'Oreille dist.; Talache. **Development:** Approximately 16,000 ft. of underground workings, the principal of which is a main haulage tunnel, 3900 ft. long and the main inclined raise 913 ft. long. **Plant:** MINE: 9x10 Hendrie-Bolthoff electrically driven geared hoist, 1320 cu. ft.; 2 stage I-R type Pre-2 compressor, electrically driven; haulage, G. E. 4-ton storage battery locomotive; buildings, 44 room hotel, 24 residences, compressor house, blacksmith shop, warehouse, cook house, store, dry room and office. **MILL:** 150 ton flotation. 2 stage crushing to ½ in. fine grinding to 80 mesh, electrically driven. **Ore:** Silver. **Men employed:** Average, 170. One of the principal silver mines in the State, and the largest new producer and dividend payer to come in during 1922. The mine, mill and camp are fully described and illustrated in Silver Mining and Milling at Talache, Idaho, by F. E. Wormser: Eng. and Min. Jour.-Press, vol. 114, pp. 581-585, Sept. 30, 1922, to which the reader is referred.

TRAIL MINING CO., LTD.

Officers: J. W. Lloyd, Pres.-Mgr., 903 Knox Ave., Spokane, Wash.; E. W. Dreisbach, Sec., Sandpoint. **Inc.:** June 29, 1920; charter forfeited Dec. 1, 1921. **Capital:** 1,000,000 shares; par value 10c.; 613,000 shares issued. **Property:** Trail group; 2 unpatented claims, Priest Lake dist.; Priest River. **Development:** Approximately 125 ft. of underground workings, including 1 shaft 50 ft. deep.

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Alamo Group	Pend d'Oreille	Sam Owen	Hope
Bay City et al.	Pend d'Oreille	D. M. Garretson	Midas
Bluebird	Pend d'Oreille	Coleman & Ward	Sandpoint
Catherine	Pend d'Oreille	F. O. Berg	244 Riverside, Spokane, Wash.
Comet	Lakeview	Robert Rennie	Lakeview
Conjecture	Lakeview	Robert Rennie	Lakeview
Copper Bell et al.	Pend d'Oreille	W. F. Fleming	Clark Fork
Copper King et al.	Pend d'Oreille	John Larson	Hope
Copper Prince	Lakeview	William C. Ames	Sandpoint
Cuban	Priest Lake	Walter Binkley	Priest River
Ella et al.	Lakeview	John W. Sheer	Lakeview
Hog Eye et al.	Pend d'Oreille	W. F. Sharai	Hope
Keep Cool	Lakeview	John C. Semple	Wallace
Log Cabin	Priest River	Chas. Hagenson	Priest River

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Lucky Abe	Priest Lake	Frank F. Nelson	Priest River
Mimetite	Pend d'Oreille	John Bohanan	Clark Fork
Mogul Group	Lakeview	E. D. Faust	Lakeview
Moonlight	Lakeview	John P. Lewellyn	Sandpoint
Morning Star	Pend d'Oreille	F. S. Hayes	Hope
Ponderosa Group	Pend d'Oreille	C. I. White	Clark Fork
Pride of the West	Priest Lake	John Hamburg	Priest River
Ready Cash	Lakeview	J. H. Bruyere	Bayview
Red Horse	Pend d'Oreille	Ed Hammon	Sandpoint
Rose of Killarney	Priest Lake	M. T. Holohan	Priest River
Scotchman	Pend d'Oreille	Dr. C. P. Stackhouse	Sandpoint
Silver King	Pend d'Oreille	W. N. Brown & Co.	Sandpoint
Silver King	Priest Lake	Joseph Saccomonno	Priest River
Silver Plate	Pend d'Oreille	H. S. Fry	Sagle
Silver Star	Pend d'Oreille	C. O. Olsen	Sandpoint
Sweeney-Walker	Pend d'Oreille	Geo. M. Walker	Sandpoint
Tiger et al.	Priest Lake	Mrs. James Judge	Priest River
True Fisher	Pend d'Oreille	Fred Vogel	Clark Fork
Twilight et al.	Pend d'Oreille	C. B. Stuart	Sandpoint
Watchman	Pend d'Oreille	S. B. Howe	Clark Fork
Wellington	Pend d'Oreille	W. F. Sharai	Hope
Wood Rat	Priest Lake	J. W. Lloyd	Priest River
Yankee Boy	Pend d'Oreille	Jos. Reed	Clark Fork

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BONNEVILLE COUNTY

One dredge in operation, electric power for which is supplied by a power plant and an 18 mile transmission line constructed by the company, Wolverine Placer Mines Co.; the largest hydraulic plant installation constructed in Idaho during 1922, that of the Caribou Placer Co.; and the three prospectors equipping their properties for hydraulic operations indicate that the placer mines of the Mt. Pisgah district are being extensively exploited and that these operations will soon put this large agricultural county into the list of mineral producing counties of the state. The placer deposits of the Mt. Pisgah district cover a large area and the operations mentioned above will probably cover a period of years.

The extensive phosphate beds of southeastern Idaho are exposed over a large area of this county and eventually will be an important resource which will add to its prosperity.

In addition to placer gold and phosphate, gold, copper, silver, coal, tripoli, bentonite, and many structures favorable to the accumulation of commercial oil are found throughout the county.

The coal prospects of the Willow Creek were idle throughout the year.

The large increase in placer mining operations, a small increase in lode mining and more investigations greatly increased the mining activities of this county over those of the previous year.

CARIBOU GOLD & COPPER CO., LTD.

Office: Idaho Falls. **Officers:** E. H. Wakeman, Pres.; A. V. Scott, Sec., both of Idaho Falls. **Inc.:** Oct. 8, 1903. **Capital:** 250,000 shares; par value \$10; 6000 shares issued. **Property:** Monte Cristo group; 7 unpatented claims, Mt. Pisgah dist.; Gray. **Development:** 1 tunnel, 800 ft. long; one shaft, 180 ft. deep; small amount of crosscutting and drifts.

CARIBOU PLACER CO.

Office: 928 Frick Bldg., Pittsburgh, Pa. **Officers:** S. J. Lehr, Pres., R. D. 7, Greensburg, Pa.; George R. Wallace, Sec., 928 Frick Bldg., Pittsburgh, Pa.; William F. Hayden, Mgr., Newhouse Bldg., Salt Lake City, Utah. **Inc.:** Nov. 5, 1921. **Capital:** 18,400 shares common; 1600 shares preferred; par value \$100; 13,757 shares issued. **Property:** Caribou placer; 13 unpatented claims, Mt. Pisgah dist.; Gray. **Ore:** Placer gold. **Men employed:** Average, 20. **Remarks:** During the year the company installed standard hydraulic equipment, completed a 4-mile ditch system with 2500 ft. of main pipe line supplying two 4-inch giants; 300 ft. sluice line 30 in. wide, equipped with Hungarian riffles, and Diester-Overstrom black sand concentrating tables; clean-up and amalgamation plant; 30 h. p. hydroelectric plant with 1 mile transmission line; constructed large company residence, boarding and bunk houses for the accommodation of 20 men, warehouse and office buildings, blacksmith shop, assay office and numerous smaller buildings. The work undertaken by this company, the amount of money spent, and the plant installed represent the largest hydraulic enterprise commenced during the year.

IDAHO GOLD MINING CO.

Office: 307 Dooly Bldg., Salt Lake City, Utah. **Officers:** Ezra Thompson, Pres.; W. A. Wilson, Sec.-Mgr., both of 307 Dooly Bldg., Salt Lake City, Utah. **Inc.:** April 19, 1917. **Capital:** 150,000 shares; par value 10c.; all shares issued. **Property:** Robinson group; 2 patented, 4 unpatented claims, Mt. Pisgah dist.; Gray. **Development:** 1 tunnel, 500 ft. long. **Plant:** 10-stamp mill, amalgamation, steam driven. **Ore:** Gold. **Remarks:** Idle for many years.

ONEIDA SOUTH MINING CO.

Office: Blackfoot. **Officers:** Francis J. Kiely, Pres.; Marie J. Kiely, Sec., both 406 Woodlawn Ave., Jersey City, N. J.; George F. Gagon, Treas., Blackfoot. **Inc.:** March 4, 1921. **Capital:** 450,000 shares; par value \$1; shares issued, unknown. **Property:** Oneida South; 1 unpatented claim, Mt. Pisgah dist.; Gray.

U. S. GOLD SILVER MINING & DEVELOPMENT CO.

Office: Shaw Bldg., Boise. **Officers:** C. A. Phillips, Pres.-Mgr.; C. E. Winstead, Sec., both of Boise. **Inc.:** March 27, 1920. **Capital:** 10,000 shares; par value \$100; 3197 shares issued. **Property:** Searchlight group; 9 unpatented claims, Mt. Pisgah dist.; Gray.

WOLVERINE PLACER MINES CO.

Office: 1007 Boston Bldg., Salt Lake City, Utah. **Officers:** H. L. Rasmason, Pres.; William Story, Jr., Sec., both 1007 Boston Bldg., Salt Lake City, Utah. **Inc.:** May 10, 1917. **Capital:** 1,000,000 shares; par value 1c.; all shares issued. **Property:** McCoy Creek group; 14 unpatented placer claims, Mt. Pisgah dist.; Gray. **Plant:** Electrically operated dipper dredge; 150 h. p. hydroelectric power plant; 18 mile transmission and telephone line connecting power plant and dredge. **Ore:** Placer gold. **Men employed:** Average, 8. **Remarks:** This company has been operating for the last two years. It has a plant outlay of approximately \$70,000.

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
American Placer	Mt. Pisgah	W. H. Stocks	Gray
Midas et al.	Mt. Pisgah	Fred Brenzinger	Gray
Toway Bar	Mt. Pisgah	J. C. Beatty	Soda Springs

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BOUNDARY COUNTY

Boundary County is fast coming to the front as an important mineral producing county, its principal resources being lead, silver, gold, zinc, copper, tungsten and molybdenum which are widely distributed throughout the county. The year 1922 recorded a large increase in mining activity over that of 1921, and, as most of the developments are substantial, the future outlook is very encouraging. At present the principal mine in this county is the Idaho Continental, one of the largest lead mines in the State. This mine was idle throughout 1921, but resumed capacity production in 1922. The Idaho Gold & Ruby Mining Co., possibly one of the largest hydraulic plants ever installed in the United States, completed its plant installation and has promised production during the coming year. The new mill constructed by the Cynide Gold Mining Co. represents the largest new mine plant installation in the State. The activities of this company and its possibilities are adding considerable to mining activity in Boundary County. This is one county in the State in which but little prospecting has been done and one that offers very many excellent opportunities to the prospector and to development companies.

BOULDER CREEK GOLD MINING CO.

Office: Naples. **Officers:** Robert Nelson, Pres.; J. S. Knauf, Sec., both of Naples. **Organization:** Partnership. **Property:** Boulder group; 9 unpatented claims, unorganized dist.; Naples. **Development:** 1 tunnel, 150 ft. long. **Plant:** Amalgamation; one 10-ton crusher; one 10-ton ball mill, steam driven. **Ore:** Gold. **Men employed:** Average, 2. **Remarks:** In addition to constructing their mill and camp buildings the mill equipment was installed and 80 ft. of development work done on the claims during the year.

BRUSH LAKE MINES CO.

Office: 412 Ziegler Block, Spokane, Wash. **Officers:** J. W. Reid, Pres., Bonners Ferry; David Emily, Sec., Spokane, Wash. **Inc.:** August 6, 1921. **Capital:** 2,000,000 shares; par value 10c. **Property:** Bethlehem group; 7 unpatented claims, Moyie Yaak dist.; Copeland. **Development:** Approximately 600 ft. of underground workings. **Ore:** Gold. **Men employed:** One watchman.

COPPER FALLS MINING CO.

Office: Eastport. **Officers:** Gus Kollman, Pres.-Mgr., Gem; Spencer Lewis, Sec.-Treas., Eastport. **Inc.:** March 30, 1911. **Capital:** 1,000,000 shares; par value \$1; shares issued, unknown. **Property:** Copper Falls group; 5 unpatented claims, Moyie Yaak dist.; Addie. **Development:** 3 tunnels: No. 1, 600 ft. long; No. 2, 240 ft. long; No. 3, 50 ft. long; 1 vertical shaft, 45 ft. deep. Total development approximately 1200 ft.

CYNIDE GOLD MINING CO.

Office: Bonners Ferry. **Officers:** J. B. Ellis, Pres.-Mgr.; George R. Causton, Sec., both of Bonners Ferry. **Inc.:** Jan. 21, 1919. **Capital:** 3,000,000 shares; par value \$1; shares issued, unknown. **Property:** Buckhorn group held under lease and bond; 6 unpatented claims, Moyie Yaak dist.; Bonners Ferry. **Development:** Over 3000 ft. of underground workings, the principal tunnels being Sand tunnel 350 ft. long; Upper Keystone, 350 ft. long; Lower Keystone, 500 ft. **Plant:** MINE: 130 cu. ft. C-P gas driven compressor; 400 cu. ft. C-P electrically driven compressor; complete mining equipment, camp and buildings; 4200 ft. aerial tram connecting mine and mill. **Ore:** Gold. **Men employed:** Average, 16. **Remarks:** This company installed a saw mill and water system, constructed a number of new camp buildings and a mill building and practically completed the installation of the milling equipment in the latter building. The new mill is a fine grinding cyanide plant designed to handle 200 tons per day.

DEER CREEK GOLD MINING CO., LTD.

Office: Bonners Ferry. **Officers:** S. E. Henry, Pres.; B. H. Walker, Sec.-Treas., both of Bonners Ferry. **Inc.:** Dec. 4, 1913. **Capital:** 1,000,000 shares; par value $\frac{1}{2}$ c.; 750,000 shares issued. **Property:** Buckhorn group; 6 unpatented claims, Moyie Yaak dist.; Meadow Creek. **Remarks:** Under lease and option to Cynide Gold Mining Company.

DIAMOND STAR & COPPER DALE MINING CO.

Office: Naples. **Officers:** Andrew J. Dahlin, Pres.-Mgr.; Emil Lunden, Sec., both of Naples. **Inc.:** Sept. 22, 1919. **Capital:** 2,000,000 shares; par value \$1; 1,010,008 shares issued. **Property:** Copper Dale group; 5 unpatented claims, Moyie Yaak dist.; Naples. **Development:** 3 short tunnels. **Ore:** Copper-silver. **Men employed:** Average, 2. **Remarks:** Small amount of development work was done during the year.

EILEEN MINING CO., INC.

Office: Spokane, Wash. **Officers:** G. A. Henkel, Pres.; R. F. Young, Sec.-Treas., both of Spokane, Wash. **Inc.:** Presumably a foreign corporation that has never filed in Idaho. **Capital:** 500,000 shares; par value 10c.; 411,360 shares issued. **Property:** Eileen group; 6 unpatented claims and 80 acres patented land, Moyie Yaak dist.; Meadow Creek. **Development:** Approximately 300 ft. of underground workings. **Ore:** Lead-silver. **Men employed:** Average, 3. **Remarks:** A considerable amount of development and prospecting work was done throughout the year.

GOLDEN SCEPTRE MINING CO., LTD.

Office: E. 227 Nora Ave., Spokane, Wash. **Officers:** H. M. Gronvold, Pres., 1809 Grove Ave., Spokane, Wash.; O. S. Elvigen, Sec., E. 227 Nora ave., Spokane, Wash. **Inc.:** August 30, 1909. **Capital:** 1,500,000 shares; par value 50c.; 790,000 shares issued. **Property:** Golden Sceptre group; 5 unpatented claims, Porthill dist., Porthill. **Development:** Approximately 3000 ft. of underground workings, including one tunnel over 1500 ft. long. **Plant:** Gas driven compressor and complete mining equipment. **Ore:** Copper-gold. **Men employed:** Average, 2.

IDAHO CONTINENTAL MINING CO.

Office: 805 Sellwood Bldg., Duluth, Minn. **Officers:** Henry Turrish, Pres.; Henry Maxeiner, Sec., both 805 Sellwood Bldg., Duluth, Minn. **Inc.:** Dec. 12, 1902. **Capital:** 1,500,000 shares; par value \$1; 1,200,000 shares issued. **Property:** Continental group; 15 patented, 5 unpatented claims, Porthill dist.; Klockmann. **Remarks:** Property owned by this company is operated under a lease by The Idaho Continental Co., which see.

IDAHO CONTINENTAL CO., THE

Office: 711 Paulsen Bldg., Spokane, Wash. **Officers:** A. Klockmann, Pres.-Mgr.; Richard Schacht, Sec., both 711 Paulsen Bldg., Spokane, Wash. **Inc.:** Jan. 11, 1910. **Capital:** 1,500,000 shares; par value \$1; all shares issued. **Property:** Lease on property of Idaho Continental Mining Co. **Development:** Approximately 9000 ft. of underground workings consisting principally of 5 tunnels: No. 1, 750 ft. long; No. 2, 100 ft. long; No. 3, 750 ft. long; No. 4, 1800 ft. long; No. 5, 1750 ft. long. **Plant:** MINE: 1200 cu. ft. I. R. Imperial type 10 compressor; Leyner drill sharpener and complete mining equipment; 1600 aerial tram between mine and mill. MILL: 250-ton concentrator; 10x10 crusher; conveyor belt; 4 double 4 compartment Hartz jigs; 3 rolls 12x30; drag classifier; 5 Wilfley tables; Hardinge ball mill; 4 Frue vanners; flotation; hydroelectric power plant. **Ore:** Lead-silver. **Men employed:** Average, 50.

Remarks: Early in 1922 this company revamped its mill, changed the flow sheet and added a flotation unit, since which time active production has been maintained. In addition to the mill changes No. 5 tunnel was advanced continuously throughout the year and a large amount of diamond drilling was done. The new ore exposed by the drill and being developed by No. 5 tunnel has greatly increased the ore reserves of this property. In the past the greatest difficulty has been in transporting the ore from the mine to the railroad, a distance of 26 miles. This problem was solved with 10-ton Holt caterpillar tractors which are proving successful. The new construction and development work has been financed by the Bunker Hill & Sullivan M. & C. Co., which has purchased an interest in the lease and to whose smelter all ore is shipped.

IDAHO GOLD & RUBY MINING CO.

Office: 502 Mohawk Bldg., Spokane, Wash. **Officers:** J. M. Schnatterly, Pres.-Mgr.; M. L. McCormick, Sec., both 502 Mohawk Bldg., Spokane, Wash. **Inc.:** July 23, 1910, as Idaho Gold & Radium Mining Co., name changed Jan. 26, 1916. **Capital:** 4,000,000 shares; par value \$1; 3,986,848 shares issued. **Property:** 121 placer and lode claims, approximately 2420 acres, Moyie Yaak dist.; Leonia. **Development:** Five mile, 200 sec. ft. capacity canal, giving a working head of approximately 430 ft.; in two sections, upper 3 miles long, lower 2 miles, with a difference in elevation of 210 ft. Water conducted from upper to lower through two 22-inch steel pipes. About 20 miles of road, five of which was very heavy construction. Lode claims developed by numerous cuts and tunnels. **Plant:** Approximately 3000 ft. of steel pipe; one 8-inch giant operating under a 430 ft. head and two 5-inch giants operating under 130 ft. head; bed rock flume and spillway 300 ft. long on a grade of 10 inches in 12 ft.; in three sections, spillway 12 ft. wide by 8 ft. deep; one flume 6 ft. wide and one 12 ft. wide, both 8 ft. deep. Concentrates from flume discharge into cement lined tank of approximately 15,000 ton capacity from which it is elevated into cleaning plant on top of flume. Cleaning plant consists of Ogden tables, classifiers and specially designed riffles. Complete machine shop, sawmill, planing mill, overhead cable system operated by steam; tractor haulage; Complete company buildings and 35 individual homes for the men. **Ore:** Principally placer gold. **Men employed:** Average, 50. **Remarks:** During 1922 this company completed its hydraulic flume, construction of its concentrating plant and installation of equipment therein and laid a large amount of cement in the bed of Boulder Creek which is used as a head race to the hydraulic flume. Production was promised for 1922, but due to conditions over which the company claims it had no control this did not materialize, but is fully expected during the early part of 1923; and until active operation is started, the outcome of this, the largest hydraulic plant installation ever installed in Idaho, will be unknown.

INTERNATIONAL MOLYBDENUM CO.

Office: Porthill. **Officers:** W. H. Rideout, Pres.-Mgr., Porthill; Martha J. Hinton, Sec., Tekoa, Wash. **Inc.:** An association. **Capital:** 20,000 shares; par value \$25; 10,055 shares issued. **Property:** Hottentot group; 2 unpatented claims, Porthill dist.; Porthill. **Development:** 1 tunnel 40 ft. long and a number of open cuts. **Ore:** Molybdenum. **Men employed:** Average, 3. **Remarks:** Active operation throughout the year.

LUCKY ABE MINING CO.

Office: Priest River. **Officers:** Abe Johnson, Pres., Opportunity, Wash.; F. F. Nelson, Sec.-Treas., Priest River. **Inc.:** March 1, 1916. **Capital:** 1,000,000 shares; par value 10c.; 57,750 shares issued. **Property:** Lucky Abe group; 4 unpatented claims; Priest Lake dist.; Priest River. **Development:** Approximately 250 ft. of workings. **Ore:** Lead-silver-copper.

METALS MINING CO.

Officers: H. W. Kirchoff, Pres., Bonners Ferry. **Inc.:** June 24, 1920. **Capital:** 450,000 shares; par value 1c.; 3000 shares issued. **Property:** Gold Shaft group; 4 unpatented claims, Moyie Yaak dist.; Bonners Ferry. **Development:** 1 tunnel 90 ft. long, 1 inclined shaft 40 ft. deep. **Ore:** Lead-silver.

MOYIE GOLD COPPER MINING & MILLING CO., LTD.

Office: Bonners Ferry. **Officers:** J. W. Reid, Pres.; G. E. Crocker, Sec.-Mgr., both of Bonners Ferry. **Inc.:** Sept. 16, 1911. **Capital:** 1,250,000 shares; par value \$1; 925,000 shares issued. **Property:** Queen and Damon groups; 13 unpatented claims, Moyie Yaak dist.; Bonners Ferry. **Development:** 6 tunnels and 2 shafts, approximating 1400 ft. **Ore:** Lead-silver. **Remarks:** Assessment work only.

PAT AND PETE COPPER MINING CO.

Office: Spokane, Wash. **Officers:** E. P. Gaillac, Pres.-Mgr.; W. W. Wallace, Sec., 307 Hyde Block, Spokane, Wash. **Inc.:** June 6, 1917. **Capital:** 1,000,000 shares; par value 10c.; 483,800 shares issued. **Remarks:** Owns or controls no mining property in Idaho.

TUNGSTEN HILL MINING CO.

Office: Spokane, Wash. **Officers:** Austin Ready, Pres.; C. D. Muxen, Sec., Symonds Bldg.; G. A. Henkel, Mgr., all of Spokane, Wash. **Inc.:** March 8, 1918. **Capital:** 1,000,000 shares; par value 5c.; 720,623 shares issued. **Property:** Tungsten Hill group; 18 unpatented claims, Moyie Yaak dist.; Meadow Creek. **Development:** 2 tunnels: No. 1, 282 ft. long; No. 2, 80 ft. long. **Plant:** Small gas driven compressor; complete mining equipment. **Ore:** Tungsten. **Remarks:** Small amount of development work done during the year.

TWIN LEDGE MINING CO.

Office: Bonners Ferry. **Officers:** Alex Rosander, Pres.-Mgr., Addie; C. W. King, Sec., Bonners Ferry. **Capital:** 1,000,000 shares; par value 10c.; 634,700 shares issued. **Property:** Twin Ledge; 1 unpatented claim, Moyie Yaak dist.; Naples. **Development:** Approximately 100 ft. of underground workings. **Ore:** Gold. **Men employed:** Average, 2. **Remarks:** The company reports a good showing of gold ore and active development work throughout the year.

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BUTTE COUNTY

The principal mineral resources and the most extensive mining operations in this county are found at the large limestone quarries at Arco operated by the Amalgamated Sugar Company and the Utah-Idaho Sugar Company. These two quarries, which were operated for about eight months during the year, produced a large tonnage of lime rock and employed approximately 60 men. The limestone is of such fine quality that both of these companies closed down their other quarries and now get all the rock used in their Idaho and Utah sugar factories from the mines at Arco. This change greatly increased the production from the Arco quarries, thus adding to the county's activities and production. The other mineral resources of the county are lead, silver, zinc, gold, tungsten and manganese, the high grade lead-silver ores being the most important as they are found in all of the mining districts of the county.

In the Dome district the Wilbert Mining Company employed 12 men throughout the year in driving its large drainage tunnel which will give considerable depth below the old workings. On the completion of this tunnel a concentrating plant will probably be constructed and this old producing mine again placed on the active list. A number of prospectors and one other company were active in this district.

The Lava Creek district, throughout which all of the minerals found in the county are distributed, was much more active than during 1921; two companies, St. Louis Mining Company, and the Rosenfield Mining Company, did a large amount of prospecting work during 1922. A large number of prospectors were active, the results were very encouraging and the outlook for the future growth of this district is very bright.

The Badger Creek district, which is located at the head of Little Lost River, had a marked increase in prospecting and development. The principal ores in this district are those of copper and lead-silver. A large amount has been shipped in the past and 1923 will probably record a resumed production.

This county offers many opportunities to the prospector.

METTA MINING CO.

Office: Blackfoot. **Officers:** Soren Yorgesen, Pres., A. E. Christensen, Sec.-Mgr., both of Shelley. **Inc.:** Oct. 20, 1906. **Capital:** 1,000,000 shares; par value \$1; 362,000 shares issued. **Property:** Metta group; 4 unpatented claims, Hamilton dist.; Howe, R. R., Dubois, 47 miles. **Development:** 3 short tunnels and 3 short inclined shafts; total development work approximately 450 ft. **ORE:** Lead-silver. **Men employed:** Average, 2. **Remarks:** This company is developing a very creditable showing and did considerable work during the year.

ROSENFIELD BROS.

Office: Helena, Mont. **Officers:** I. Rosenfield, Mgr. **Inc.:** Partnership. **Property:** Horn Silver group; 30 unpatented claims, Lava Creek dist.; Arco. **Development:** Approximately 1200 ft. of underground development. **Men employed:** Average, 4. **Remarks:** Conducted an active prospecting campaign throughout the year.

ST. LOUIS MINING CO.

Office: Martin. **Officers:** John Potter, Mgr., Martin. **Organization:** Unknown. **Property:** St. Louis group; 7 unpatented claims, Lava Creek dist.; Martin. **Development:** Over 1500 ft. of underground workings consisting principally of 5 tunnels. **Ore:** Lead-silver. **Men employed:** Average, 4. **Remarks:** This company has been actively engaged in prospecting and development work throughout the year and made a small shipment of high grade ore.

WILBERT MINING CO., LTD.

Office: 221 Kearns Bldg., Salt Lake City, Utah. **Officers:** A. S. Ross, Pres.-Mgr.; J. A. Foley, Sec., both 221 Kearns Bldg., Salt Lake City, Utah. **Inc.:** April 10, 1907. **Capital:** 2,000,000 shares; par value 50c.; 1,664,813 shares issued. **Property:** Black Daisy group; 4 patented, 27 unpatented claims, Dome dist.; Howe, R. R., Arco, 42 miles. **Development:** Approximately 9000 ft. of underground workings, the principal of which is No. 4 tunnel which, when completed, will be 1600 ft. in length, giving a vertical depth on the vein of approximately 650 ft. **Plant:** 50 h. p. C-P gas driven compressor; complete mining equipment and camp. **Ore:** Lead-silver. **Men employed:** Average, 14. **Remarks:** Boarding house, bunk house, residences, office and compressor building and equipment were moved to the portal of No. 4 tunnel in January, after which this tunnel was commenced and extended to over 1500 ft. in length. The property held by this company is an old producer and the new tunnel will open the ore reserves at a considerable depth below the old workings.

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Badger Creek	Hamilton	Frank Peete	Clyde
Beats-em-all	Lava Creek	Neils Thompson	Martin
Johnson Gr.	Dome	Lew Johnson	Hailey
Copper King Gr.	Lava Creek	B. A. Smith	Arco
Cut Wall	Hamilton	W. A. Beakley	Blackfoot
Denver Gr.	Lava Creek	Leonard Dresser	Emmett
Edna et al.	Lava Creek	D. W. Nichols	Martin
Gold Belt Gr.	Lava Creek	J. M. Walker	Blackfoot
Golden Chariot	Lava Creek	Mabel R. Rush	6710 Windsor Ave. Chicago, Ill.
Granite Mountain	Lava Creek	E. H. Hammond	Arco
Gray Wolf et al.	Hamilton	Geo. Campbell Est.	Clyde
Great Western	Lava Creek	Daniel Romney	Arco
Hidden Treasure	Lava Creek	Wm. Heslop	Martin
Homestake	Lava Creek	J. F. Houf	Arco
Hornsilver	Lava Creek	Parr Bros.	Arco
Hub Gr.	Lava Creek	S. O. Nelson	Boise
Ironsides	Lava Creek	A. Brim	Martin
Ironsides	Lava Creek	Gordon Lee	Boise
Lead Belt	Lava Creek	H. W. Weiler et al	Mackay
Little Jim	Lava Creek	John T. Welch	Arco
Neppar et al.	Hamilton	John Linder	Howe
Policy	Lava Creek	Hugo Vogelsang	Arco
Rabbits Foot	Lava Creek	Harry Schwamb	Hailey
.....	Badger Creek	George Hooper	Howe
Reliance	Lava Creek	T. C. Woodbridge	Arco
St. Louis	Lava Creek	J. H. Scott	Martin

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Second Chance	Lava Creek	Riley Kent	Arco
Shail & Comstock	Dome	Shail & Comstock	Rexburg
Silver Horn et al.	Lava Creek	E. B. Jones	Martin
Southern Cross	Lava Creek	Ira Martin	Martin
Sunbeam	Dome	Isidore Fallert	Howe
Weiler	Antelope	H. W. Weiler	Mackay

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CAMAS COUNTY

The principal mineral resources of this county are gold—placer and lode—lead-silver, zinc, copper, tungsten, diatomaceous earth and nitrate. All of the placer ground that could be hydraulicked was exhausted years ago, but many acres of virgin ground suitable for dredging operations are still available and worthy of investigation. All of the gold quartz properties, with one exception, were idle.

At one time, when this county was a part of Blaine County, a large amount of mining for lead-silver was done in the Little Smoky and Rosetta districts. A great many properties in these districts produced a large amount, but due to faulting, the continuation of the ore bodies was lost, so these districts are now practically dormant. Conditions are quite similar to those of the Wood River section in Blaine County and under proper management and direction there seems to be no reason why these old mines cannot be revived.

The mineral resources of this county offer many possibilities and justify more attention than has been devoted to them during the past few years, although 1922 did record considerable increase in interest shown.

ALLIANCE MINES CO.

Office: Empire Bldg., Boise. **Officers:** Frank E. Johnesse, Pres. **Inc.:** June 27, 1918. **Capital:** 1,500,000 shares; par value \$1; 660,300 shares issued. **Property:** Big Copper group; 7 unpatented claims, Volcano dist.; Hill City. **Development:** Approximately 200 ft. underground workings. **Remarks:** Idle.

ASSOCIATED MINES CO.

Office: 307 McCarty Bldg., Boise. **Officers:** George Parkin, Pres., Meridian; P. L. Tawney, Sec., Boise. **Inc.:** Jan. 14, 1918. **Capital:** 1,000,000 shares; par value 25c.; 600,000 shares issued. **Property:** 11 unpatented claims, Little Smoky dist.; Fairfield.

GOLD LEDGE MINING CO.

Office: Fairfield. **Officers:** Robt. O. Jones, Pres.; D. F. Banks, Sec., both of Boise; D. W. Zent, Mgr., Fairfield. **Inc.:** Jan. 31, 1921. **Capital:** 50,000 shares; par value \$1; all shares issued. **Property:** Gold Ledge group; 3 unpatented placer claims, Little Smoky dist.; Fairfield. **Ore:** Gold. **Remarks:** A small amount of sluicing and development work was done during the year.

LITTLE SMOKY MINING CO., LTD.

Office: Hailey. **Officers:** A. T. Kingsbury, Pres., Akron, Ohio; L. R. Shurtleff, Sec., Boise. **Inc.:** April 1, 1910. **Capital:** 500,000 shares; par value \$1; 310,651 shares issued. **Property:** 3 unpatented placer claims; 480 acres, Little Smoky dist.; Fairfield. **Ore:** Placer gold. **Remarks:** Assessment work only.

THE MAGNET MINING & MILLING CO.

Office: 424 Dooly Blk., Salt Lake City, Utah. **Officers:** George H. Clark, Pres., 424 Dooly Blk., Salt Lake City, Utah; J. C. Brandon, Sec., St. Anthony. **Capital:** 1,200,000 shares; par value 10c.; 857,000 shares issued. **Property:** Hidden Treasure group; 4 unpatented claims owned by Chas. J. Sherry, Fairfield, held under lease and bond, Little Smoky dist.; Fairfield. **Development:** 3 tunnels and a number of crosscuts and drifts. Total, approximately 1500 ft. of underground workings. **Plant:** 50-ton concentrator; steam driven; crusher, 2 sets of rolls and 2 two-compartments jigs, Wilfley and Overstrom tables. **Ore:** Lead-silver. **Remarks:** Various disagreements compelled the property to lie in idleness throughout the year.

METALS & GENERAL DEVELOPMENT CO.

Office: Empire Bldg., Boise. **Officers:** Frank E. Johnesse, Pres.-Mgr., Empire Bldg., Boise. **Inc.:** April 20, 1917. **Capital:** 6025 shares; par value \$1; all shares issued. **Property:** 21 unpatented claims, Volcano dist.; Hill City. **Development:** Approximately 425 ft. of underground workings, the principal of which is a 200 ft. inclined shaft. **Ore:** Copper. **Remarks:** Idle.

WALTON MINES CO.

Office: 308 Lindelle Blk., Spokane, Wash. **Officers:** E. M. Stadel, Pres., Missoula, Mont.; George R. Colvin, Sec.-Mgr., Fairfield. **Inc.:** April 28, 1921. **Capital:** 3,750,000 shares; par value 10c.; 596,330 shares issued. **Property:** Five Point group, held under lease and bond; 6 unpatented claims, Little Smoky dist.; Fairfield. **Development:** 4 tunnels approximating 1100 ft. in length. **Plant:** 30-ton steam driven concentrator. **Ore:** Lead-silver. **Men employed:** Average, 7.

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Axalorr Placer	Skeleton Creek	R. M. Angel	Fairfield
Bear Creek	Skeleton Creek	R. S. Mockett	Lincoln, Neb.
Blue Bird	Little Smoky	Robt. Leaper	Fairfield
Carrie Leonard	Rosetta	Jas. Gilson, Agt.	Hailey
El Oro	Skeleton Creek	C. W. Smith	53 State St., Boston, Mass.
Five Points	Little Smoky	Wm. Finney	Soldier
Fourth of July	Little Smoky	H. D. Jones	Hailey
Golden Star	Little Smoky	Chris Christofsen	Fairfield
Hercules	Big Smoky	W. W. Counterman	209 So. 3d St., Boise
Horn Silver	Little Smoky	P. E. Fletcher	Fairfield
Idaho Chief	Little Smoky	Philip B. Becker	Fairfield
Isabella	Rosetta	Edw. Somers	Hailey
Jones Bar Placer	Soldier	J. H. Fleck	144 E. Idaho St., Boise
King of the West	Rosetta	Maylan C. Fox	P. O. Box 774, Salt Lake City, U.
Liberal	Little Smoky	H. E. Albins	Fairfield
Little Bob	Rosetta	M. Ryan	Fairfield
Lucky Strike	Little Smoky	Joe Vogner	Fairfield
Manchuria Placer	Rosetta	H. D. Jones	Hailey
Princess	Willow Creek	J. J. Rowley	Hailey
San Mateo	Skeleton Creek	R. King	
Silver King	Rosetta	H. D. Jones, Agt.	Hailey
Smoky Bullion	Little Smoky	Ernest Worswick	Reno, Nev.
Square Deal	Rosetta	Robert Leeper	Fairfield
.....	Little Smoky	Wm. Lewis	Fairfield

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CARIBOU COUNTY

The principal mineral resource of this county is the high grade phosphate rock which is widely distributed over a large area.

The mineral springs at Soda Springs constitute an important resource which is lying dormant. These springs have exceptional medicinal qualities, are excellent for table use, and offer a great possibility if properly developed and exploited.

Native sulphur is found in numerous places in the county. Many of these deposits are high grade and are deserving of more attention than they have received in the past.

The only salt found in the State is in this county. In early days the salt springs on Tygee and Stump Creeks were utilized as a source of salt, but since the advent of the railroads the use of these springs has been discontinued. The well being sunk by the Wallace Wyoming Oil Company has proved that the salt springs are underlaid with a massive layer of rock salt.

A number of structures favorable to the commercial accumulation of oil and gas are found in the eastern part of this county. The recent bulletin issued by the Idaho Bureau of Mines and Geology contains a large amount of valuable information relative to the oil and gas possibilities. The Wallace Wyoming Oil Company is pioneering in this field and the outcome of its operations is looked forward to with great expectancy.

The Anaconda Copper Mining Company completed installation of its mine and mill plant, which makes it the largest industrial establishment of its kind in the United States. During 1922 the company shipped a small tonnage for experimental purposes. It is now in a position to maintain capacity production whenever freight rates and prices justify.

The resources of this county, although essentially different from those of most other counties of the State, are very valuable and when opened up and properly exploited will be a material factor in the prosperity of Caribou County and the State.

ANACONDA COPPER MINING CO.

Office: Anaconda, Mont. **Officers:** C. F. Kelley, Pres.; A. H. Melin, Sec., both of 25 Broadway, New York, N. Y.; C. E. Nighman, Local Mgr., Conda, Idaho. **Inc.:** Filed in Idaho: April 10, 1916. **Capital:** 3,000,000 shares; par value \$50; all shares issued. **Property:** 2 patented, 21 unpatented claims; 343 acres, part of which is held under lease and option from Southern California Orange Grove Fertilizer Co., unorganized dist.; Conda. **Development:** Approximately

7000 ft. of underground workings, the principal of which are two 9x9 ft. tunnels; No. 1, being over 1600 ft. long and No. 2, over 700 ft. long. **Plant:** MINE: Ingersoll Rand Imperial Type 10 compressor, electrically driven; G. E. special storage battery locomotives; Little Tugger hoists; model 11 shuveloders; Sirocco ventilating fans; 10-ton side-dump cars. **MILL:** crushing and drying plant; 450 tons per 24 hours; 12-in. Traylor gyratory crusher; 22x54-in. Anaconda rolls; Mitchell screen; Ruggles-Cole dryer; conveyors; elevators; feeders. **Ore:** Phosphate rock. **Men employed:** Average, 128. **Remarks:** During the year the company completed construction of its branch line railroad to the mine; crushing and drying plants and trestles; coal bins; 3000-ton ore bin and trestles; power house substation; refrigerating plant; water supply system and powder magazine, also built 28 four-room houses for employees. Construction and development work progressed continuously throughout the year. The activities of this company represent one of the largest and most complete mine installation plants in the state. For further details see 23d Annual Report.

THE IDAHO LEASING CO.

Office: Pocatello. **Officers:** W. H. O'Brien, Pres.; R. C. Schrader, Sec., both of Pocatello. **Inc.:** April 14, 1920. **Capital:** 100,000 shares; par value \$1; 59,725 shares issued. **Property:** Oil and gas leases on patented farm lands in Star Valley, Wyoming, and Idaho; Afton, Wyo.

SOUTHERN CALIFORNIA ORANGE GROVE FERTILIZER CO.

Office: Los Angeles, Cal. **Officers:** W. D. Wolwine, Pres.; Roy V. Boswell, Sec., both of Los Angeles, Cal. **Inc.:** June 14, 1915. **Capital:** 500 shares; par value \$100; all shares issued. **Property:** Held under lease and bond by Anaconda Copper Mining Co., which see.

WALLACE WYOMING OIL CO.

Officers: G. H. Prue, Pres.; Norman Ebbley, Sec., both of Wallace; Ben H. Jackson, Mgr., Bannock Hotel, Pocatello. **Inc.:** Jan. 7, 1918. **Capital:** 2,500,000 shares; par value 10c.; 1,400,000 shares issued. **Property:** Oil and gas lease on 1320 acres patented farm land on Tygee and Tin Cup Creeks; unorganized dist.; Auburn, Wyoming; R. R., Montpelier. **Development:** 700 ft. well, the first 130 ft. of which is cased with 12½ inch casing. **Plant:** Miller well drilling outfit equipped with F-M 40 h. p. gas engine. **Mineral sought:** Oil and gas. **Men employed:** Average, 4. **Remarks:** This company installed its plant and commenced operations during the year and maintained continuous drilling.

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CASSIA COUNTY

The minerals found in this county are silver, lead, copper, gold, limestone, building stone, marble, cinnabar and coal. In the past some drilling has been done for oil and gas, but all of these companies were idle during 1922. These varied mineral resources, and particularly the high grade lead-silver and silver-copper ores of the Stokes and Dolomite districts, offer many opportunities and possibilities for prospectors and development companies. Practically all of the companies were idle throughout the year, but the entire county had a marked increase in activity over that of the previous year.

GOOSE CREEK OIL & DEVELOPING CO.

Office: Oakley. **Officers:** Edward Martin, Pres.; P. Haberman, Sec., both of Pittsburgh, Pa.; D. P. Carpenter, Mgr., Oakley. **Inc.:** Oct. 23, 1920; charter forfeited, Dec. 1, 1921. **Capital:** 1,000,000 shares; par value 50c.; 250,000 shares issued. **Property:** Government prospecting permit on 2560 acres on Coal and Goose Creeks, Oakley. **Development:** One 16-in. well down to a depth of approximately 200 ft. **Plant:** Well drilling outfit with complete equipment and tools. **Ore:** Oil and gas.

IDAHO SILVER MINING CO.

Office: Oakley. **Officers:** W. M. Garvin, Pres.-Mgr.; W. H. West, Sec., both of Oakley. **Inc.:** Aug. 2, 1920. **Capital:** 500,000 shares; par value 15c.; 183,698 shares issued. **Property:** 13 unpatented mining claims, part of which lies in Dolomite dist., Idaho, and Ashbrook dist., Utah; Vipont, Utah. **Development:** Approximately 300 ft. of underground workings. **Ore:** Silver-copper. **Men employed:** Average, 2. **Remarks:** The property owned by this company is located near and in the same belt with the famous Vipont mine. A small amount of development work was done throughout the year.

MELCHER MINING & MILLING CO.

Office: Salt Lake City, Utah. **Officers:** R. N. Wilkinson, Sec., 404 McIntyre Bldg., Salt Lake City, Utah. **Remarks:** Idle through the year: No other information available.

OAKLEY MINING & MILLING CO.

Office: Oakley. **Officers:** John H. Fairchild, Pres.-Mgr.; Lucy A. Fairchild, Sec., both of Oakley. **Inc.:** Jan. 7, 1920; charter forfeited, Dec. 1, 1921. **Capital:** 1,000,000 shares; par value 10c.; shares issued, unknown. **Property:** Boulder M group; 7 unpatented claims, Dolomite dist.; Oakley. **Remarks:** This company is owned by its president. Assessment work only.

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Alice	Stokes	W. E. Langford	229 W. 2d St., N. Salt Lake City, Utah
Badger	Stokes	J. E. Comerford	Budge
Bimetallic	Stokes	F. E. Trayme	Albion
Golden Eagle	Stokes	O H. Melcher	Albion
Hazel Pine	Black Pine	F. B. Platt	265 E. Broadway, Salt Lake City, Utah
Little Jewel	Dolomite	George Myers	Oakley
Sample Placer	Snake River	Thomas C. Elgin	Neeley
Walton No. 2	Stokes	T. C. Walton	Burley

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CLARK COUNTY

Considerable prospecting has been done in the northwest corner of this county throughout the sections which are an extension of the Nicholia district of Lemhi County, and the Dome district of Butte county. The ores found are lead-silver and copper, a small amount of which has been shipped in past years. The districts in which these minerals are found were far more active during 1922 than in previous years.

BIRCH CREEK MINING CO.

Office: Idaho Falls. **Officers:** George Brunt, Pres.; A. T. Shane, Sec., both of Idaho Falls. **Inc.:** June 2, 1917; charter forfeited, Dec. 1, 1917. **Capital:** 1,000,000 shares; par value 10c.; 500,000 shares issued. **Property:** Scott group; 8 unpatented claims, Birch Creek dist.; Winsper, R. R. Dubois, 35 miles. **Remarks:** Assessment work only for several years.

SKULL CANYON MINES

Owner: J. T. Young, Pocatello. **Property:** 425 acres, Birch Creek dist.; Winsper, R. R. Dubois, 46 miles.

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Worthington Gr.	Birch Creek	Geo. Worthington	Reno

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CLEARWATER COUNTY

Pierce City, Clearwater County, was the scene of the first gold discovered in Idaho, from which stampede and overflow resulted the discovery of other placer districts and the formation of the nucleus of the State of Idaho. This county has always been a large producer of placer gold and during the year a small amount of hydraulicking was done. A new hull was constructed for the Bailey dredge, the equipment was moved from its previous location to Rhodes Creek and active dredging was started in September. Prospecting and developing on the lode deposits during 1922 were far greater than in previous year. One company, the Bole Consolidated Mining Co., built a new camp, cleaned out the old tunnels and shafts, and commenced development work.

This county offers many opportunities in gold mining, both placer and lode. Much prospecting has been done for copper in the Pierce City district and when transportation is available this metal will greatly add to the importance of the county.

BAILEY DREDGE

Owners: James W. Hall, Winslow, Wash. **Property:** 3 unpatented claims on Rhodes Creek, Pierce City dist.; Pierce. **Plant:** Electrically operated floating dredge, consisting of 9 cu. ft. buckets and sluice line. **Remarks:** During the year a new hull was constructed and the equipment moved from its previous location and installed. Dredging was started in September.

BLOYER MINING CO.

Office: Lewiston. **Officers:** John A. Saboe, Pres.; Lawrence Cole, Sec.; Alex Bills, Mgr., all of Pierce. **Inc.:** Sept. 27, 1920. **Capital:** 50,000 shares; par value \$1; 42,230 shares issued. **Property:** Anaconda group; 7 unpatented claims, Pierce City dist.; Pierce. **Development:** Approximately 300 ft. of underground workings. **Plant:** 25-ton steam driven Chilean mill. **Ore:** Gold.

BOLE CONSOLIDATED MINING CO.

Office: Pierce. **Officers:** H. H. Mandigo, Pres.-Mgr.; John A. Saboe, Sec., both of Pierce. **Inc.:** Jan. 5, 1922. **Capital:** 300,000 shares; par value \$1; 250,000 shares issued. **Property:** Bole group; 23 unpatented claims, Pierce City dist.; Pierce. **Development:** 3 tunnels; No. 1, 620 ft. long; No. 2, 150 ft. long; No. 3, 100 ft. long; 1 inclined shaft 100 ft. long, including 200 ft. of crosscuts and drifts. **Plant:** Steam driven hoist and pumps. **Ore:** Gold. **Men employed:** Average, 4. **Remarks:** During the year a large modern bunk and cook house was built, old tunnels and shaft cleaned out and put in working order and an active prospecting campaign started.

CAREY MINING CO.

Office: Pierce. **Officers:** J. B. Rudbery, Pres., Yardley, Wash.; H. E. Rhodhamel, Sec., Spokane, Wash.; C. L. Carey, Mgr., Pierce. **Inc.:** Sept. 6, 1916. **Capital:** 50,000 shares; par value \$1; shares issued, unknown. **Property:** Orogrande group; 6 unpatented claims, Pierce City dist.; Pierce. **Remarks:** Assessment work only.

INDEPENDENCE PLACER MINING CO., LTD.

Office: Wallace. **Officers:** Wm. Fable, Pres.-Mgr.; Emil Pfister, Sec., both of Wallace. **Inc.:** Oct. 25, 1906. **Capital:** 1,000,000 shares; par value \$1; 536,622 shares issued. **Property:** Independent Placer group; 17 unpatented claims, Moose Creek dist.; Rivulet, Mont. **Ore:** Placer gold. **Remarks:** During the year the company spent a small amount in building ditches and roads.

NEW ERA GOLD DREDGING CO.

Office: Pierce. **Officers:** Edw. Gaffney, Pres.; John Gaffney, Sec., both of Pierce. **Inc.:** Aug. 11, 1916. **Capital:** 30,000 shares; par value \$1; 13,300 shares issued. **Property:** New Era group; 2 unpatented claims; 320 acres, Pierce City dist.; Pierce.

OROFINO MINING CO.

Office: Orofino. **Officers:** Fred James, Pres.-Mgr.; Savilla E. James, Sec., both of Lewiston. **Inc.:** Oct. 6, 1921. **Capital:** 50,000 shares; par value \$1; 40,000 shares issued. **Property:** Lone Pine group; 4 unpatented placer claims, Pierce City dist.; Pierce. **Ore:** Placer gold. **Men employed:** Average, 2.

OXFORD COPPER MINING CO., LTD.

Office: Moscow. **Officers:** Sampson Snyder, Pres., Orofino; L. F. Parsons, Sec., Moscow. **Capital:** 1,000,000 shares; par value \$1; 604,810 shares issued. **Property:** 6 unpatented claims, Pierce City dist.; Pierce. **Development:** Approximately 500 ft. of underground workings. **Plant:** Steam driven hoist. **Ore:** Copper. **Remarks:** Assessment work only.

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
California Placer	Pierce City	L. F. Culver	Pierce
Dream, The	Pierce City	Fred Forsman	Pierce
Fisher Creek et al.	Burnt Creek	J. C. Corbin	Elk River
Gray Eagle	Pierce City	J. McDaniels	200 Que St., Sacramento, Cal.
Grubstake et al	Burnt Creek	James Dwyer and Henry Elmer	2828 N. 4th St., Minneapolis, Minn.
Hardman Gr.	Moose Creek	C. W. Hardman	Elk River
Hay Creek Placers	Pierce City	Frank Alvord	Pierce
Hillside	Burnt Creek	John Lawrence	Dent
Jericho	Burnt Creek	F. A. Losekamp	Elk River
Lone Pine et al.	Pierce City	J. W. Bartlett	Pierce
Long Bill Placer	Pierce City	J. W. Bartlett	Pierce
Ozark	Pierce City	Chas. Meyers	Greer
Panama Gr.	Pierce City	F. P. Fitz	Pierce
Pick & Pan	Burnt Creek	John E. Rejala	Elk River
Rummel et al.	Pierce City	James Clark	Pierce
Silver Creek Placer	Pierce City	Gus Anderson	Pierce
Snake Creek Placer	Pierce City	G. V. Friedman	Pierce
Venus Placer	Burnt Creek	John Pearson	Dent
Victoria et al.	Ruby Creek	Geo. Brady	Bovill
Wendell Placer	Burnt Creek	Walter Wendell	Dent
Wild Rose	Pierce City	John Gaffney	Pierce

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CUSTER COUNTY

Custer, essentially a mining county and one of the largest mineral producers in the State, has a greater variety of minerals than any other county, the principal ones being: copper, gold (both placer and lode), silver, lead, zinc, molybdenum, tungsten, quicksilver, manganese, iron ore, antimony, and limestone, mentioned in the order of their prominence.

The Empire mine at Mackay, owned by the Idaho Metals Company, is the largest copper mine in the State, both in production and extent of underground workings. This mine, which has been a producer for over 20 years, is operated under the leasing system. Capacity production was maintained throughout 1922 at the rate of about 40 carloads per month. The large amount of development work done during the year greatly increased the ore reserves, as well as proving the further extent of the ore at depth, particularly in the Cossack tunnel.

In addition to being the largest copper producer, Custer County is also an important producer of lead and silver. The Ramshorn is essentially a silver mine, and one of the largest in the State. During 1922 capacity production was maintained. The extensive development work done greatly increased the ore reserves, which will assure the property a long life. The lead mines at Mackay, particularly the Horse Shoe Copper Company, the Anderson lease and the Blue Jay lease, recorded a very large lead production. All of these mines have substantial showings and their total production averaged about a car per day. The Red Bird, at Clayton, being operated by the Idaho Mine Development Company, greatly increased its production over that of the previous year; and the development work done materially increased the possibilities of this famous old producer. The Huffman lease, on the Beardsley group at Bay Horse, added to the lead production of Custer County.

The acquisition of the Livingston mine on Railroad Ridge by the Livingston Mines Corporation gives this county a new camp and a new mine. This company has undertaken an extensive development and construction campaign, which will add to the prosperity of the county and its future production. The operations at the Bruno, South Butte and Red Bird added considerable to the activities on Squaw Creek; these, with the prospecting work being done at the Phi Kappa, Charles Dickens, Niagara, and the work of the Sawtooth Dredging Company, all added materially to the activities of the county during 1922. This county offers untold opportunities to prospectors and development companies, and many of its numerous prospects are worthy of investigation.

AZTEC MINING & MILLING CO.

Office: Pocatello. **Officers:** T. W. Galigher, Pres.-Mgr., 915 N. 21st St., Boise; B. F. Anderson, Sec., 655 S. 10th Ave., Pocatello. **Inc.:** May 26, 1917. **Capital:** 25,000 shares; par value \$1; 20,566 shares issued. **Property:** Fisher group; 2 unpatented claims, Stanley dist.; Stanley. **Development:** 1 tunnel 400 ft. long. **Plant:** 25 h. p. steam driven hoist. **Remarks:** Assessment work only.

BAY HORSE LEASING CO.

Office: 315 Felt Bldg., Salt Lake City, Utah. **Officers:** J. A. McCaskell, Pres.; R. C. Treanor, Sec., both of 315 Felt Bldg., Salt Lake City, Utah; R. R. Huffman, Mgr., Bay Horse. **Inc.:** Feb. 6, 1920. **Capital:** 100,000 shares; par value \$1; 50,000 shares issued. **Property:** Beardsley group; 3 patented claims held under lease, Bay Horse dist.; Bay Horse. **Ore:** Lead-silver. **Men employed:** Average, 16. **Remarks:** Under the active management of Mr. Huffman, this old producer has been opened up and a large body of lead ore exposed. All ore produced is milled by the Ramshorn Mines Co. A considerable tonnage was shipped during the year.

BONANZA GOLD MINING CO.

Office: 487 Seventh Ave., Salt Lake City, Utah. **Officers:** C. F. Kabisius, Vice-Pres., 487 Seventh Ave., Salt Lake City, Utah; J. H. Snyder, Sec.-Mgr., 47 W. 5th S. St., Salt Lake City, Utah. **Inc.:** Oct. 27, 1916. **Capital:** 350,000 shares; par value \$1; shares issued, unknown. **Property:** Bonanza group; 11 unpatented claims, Yankee Fork dist.; Clayton. **Development:** Approximately 700 ft. of underground workings, consisting principally of 5 tunnels. **Ore:** Gold. **Men employed:** Average, 1. **Remarks:** Small amount of development work done during the year.

BRUNO MINING & MILLING CO.

Office: 43 Exchange Place, New York City, N. Y. **Officers:** P. L. Hughes, Pres.; J. A. Crowe, Sec.; W. K. Yorston, Mgr., all of 43 Exchange Place, New York. **Inc.:** Sept. 19, 1921. **Capital:** 500,000 shares; par value \$1; 340,000 shares issued. **Property:** Bruno group, on Squaw Creek; 10 unpatented claims, Bay Horse dist.; Clayton. **Development:** 2 tunnels; No. 1, 500 ft. long; No. 2, 300 ft. long; 1 vertical shaft 400 ft. deep. **Plant:** Steam driven hoist and compressor. **Ore:** Lead-silver, gold. **Men employed:** Average 6. **Remarks:** This company is one of the principal new operators of Custer county. The property acquired is an old producer, which has been dormant for a great many years. A road was constructed, plant installed, mine rehabilitated, and active development work started.

BURNS MINING & MILLING CO.

Office: Meridian. **Officers:** G. W. Parkin, Pres.; J. M. Evans, Sec., both P. O. Box 63, Meridian. **Inc.:** May 3, 1911. **Capital:** 500,000 shares; par value \$1; 339,327 shares issued. **Property:** Burns group; 7 unpatented claims, Seafoam dist.; Stanley. **Ore:** Lead-silver, gold. **Remarks:** Assessment work only.

CHAMPION MINING CO.

Office: P. O. Box 56, Salt Lake City, Utah. **Officers:** Edward R. Hall, Pres., 1729 Chicago Ave., Evanston, Ill.; R. T. Badger, Sec., 229 S. W. Temple St., Salt Lake City, Utah; C. T. Mixer, Vice Pres.-Mgr., Box 56, Salt Lake City, Utah. **Inc.:** Nov. 9, 1905. **Capital:** 1,000,000 shares; par value 10c; 911,065 shares issued. **Property:** Champion group; 12 unpatented claims between Cliff and Alder Creeks, Alder Creek dist.; Mackay. **Development:** Approximately 2000 ft. of underground workings. **Ore:** Lead-silver. **Men employed:** One.

GREYHOUND MINING & MILLING CO., LTD.

Office: Gem Bldg., Boise. **Officers:** W. C. Annett, Pres.; Edward Smith, Sec., both of Boise. **Inc.:** Sept. 2, 1902. **Capital:** 1,500,000 shares; par value \$1; 1,474,145 shares issued. **Property:** Greyhound group; 7 patented claims, Seafoam dist.; Stanley. **Plant:** Stamp mill, ten 1050 lbs. stamps; crusher; 2-Dorr classifiers; 4 vanners and a small circular blast furnace. **Remarks:** Idle for a number of years.

HORSE SHOE COPPER CO., LTD.

Office: Mackay. **Officers:** S. K. Paxton, Pres., Los Angeles, Cal.; D. V. Archbold, Sec.; George L. Morgan, Mgr., Mackay. **Inc.:** Dec. 10, 1903. **Capital:** 1,000,000 shares; par value \$1; 916,150 shares issued. **Property:** Horseshoe group; 17 unpatented claims, Alder Creek dist.; Mackay. **Development:** The mine is developed principally by 3 tunnels, 2 short shafts and a large amount of crosscuts, drifts, and raises. Total: Many thousand feet. **Ore:** Lead-silver. **Men employed:** Average, 10 leasers. **Remarks:** This property has been operated throughout the entire year under the leasing system. A large amount of development work was done, and a considerable tonnage of lead ore shipped. This property is one of the principal lead producers of the Mackay section.

IDAHO METALS CO.

Office: Mackay. **Officers:** L. R. Eccles, Pres.; H. D. Campbell, Sec., both of Ogden, Utah; H. V. Jenkins, Mgr., Mackay. **Inc.:** Oct. 8, 1921. **Capital:** 1,200,000 shares; par value \$1; 1,100,000 shares issued. **Property:** Empire Copper group; 18 patented, 21 unpatented claims, Alder Creek dist.; Mackay. **Development:** Over 20 miles of underground workings, the principal entries being the Cossack and Alberta tunnels; the Cossack is 650 feet below the Alberta tunnel; and the principal shaft is the Empire, which is in the Alberta tunnel and extends 350 feet below. **Plant:** Air driven hoist; 20-drill, steam driven Laidlaw-Dunn-Gordon compressor, and an aerial tramway 16,300 ft. long connecting mine with railroad. **Ore:** Copper-silver. **Men employed:** Average, 75. **Remarks:** This mine, an active producer for over 20 years and the largest copper mine in Idaho, is worked entirely under the leasing system. Active production was maintained throughout the year, at the rate of approximately 40 cars per month. A large amount of new ore was developed during the year.

IDAHO MINE DEVELOPMENT CO.

Office: Clayton. **Officers:** Robert N. Bell, Pres., Boise; William M. Snow, Sec.-Treas., Clayton. **Inc.:** Jan. 21, 1921. **Capital:** 500,000 shares; par value \$1; 11,200 shares issued. **Property:** Red Bird group; 15 unpatented claims, held under lease and bond from Clayton M. & S. Co., Bay Horse dist.; Clayton. **Development:** Approximately 4 miles of underground workings, consisting of 4 tunnels with 9 levels, the principal tunnels being: No. 1, 300 ft. long; No. 3, 500 ft. long; No. 4, 500 ft. long; No. 9, 1600 ft. long, giving a total depth on the vein of over 900 ft. **Plant:** 50-ton gas driven concentrator. **Ore:** Lead-silver. **Men employed:** Average, 12. **Remarks:** In addition to maintaining capacity production throughout the year, considerable development work was done, which greatly increased the ore reserves. This mine is one of the famous old lead producers of Custer County, and during the year was one of the principal producers in the county.

IVANHOE MINING CO.

Office: 485 California St., San Francisco, Cal. **Officers:** F. G. Drum, Pres.; Fred T. Elsey, Sec., both of 485 California St., San Francisco, Cal. **Inc.:** July 28, 1909. **Capital:** 2500 shares; par value \$1; all shares issued. **Property:** Badger group; 6 patented claims, Yankee Fork dist.; Clayton. **Remarks:** Idle for many years.

LIVINGSTON GROUP

Property: Held under lease and option by Livingston Mines Corporation, Fisk Bldg., 57th and Broadway, New York City; Bay Horse dist.; Clayton. **Remarks:** This company is a new entry in Custer County. The property acquired is the Livingston group, a famous producer, which is fully described in the twenty-first annual report. Active operations were commenced late in the year; the mine was rehabilitated; and a 10-mile road connecting the mine with the highway on the East Fork of the Salmon River was built. A large part of this road involved heavy construction. Plans have been completed for the erection of a mill and hydroelectric power plant.

LOON CREEK HYDRAULIC PLACER MINING CO., LTD.

Office: 301 S. Main St., Salt Lake City, Utah. **Officers:** J. Frank Judge, Pres.; John J. Harvey, Sec., both of 301 S. Main St., Salt Lake City, Utah; John P. Boyle, Mgr., Stanley. **Inc.:** May 17, 1905. **Capital:** 300,000 shares; par value \$1; 263,560 shares issued. **Property:** 6 unpatented placer claims, Loon Creek dist.; Stanley. **Remarks:** In addition to assessment work a large amount of construction and repair work was done on the hydraulic flume,

LOST HORSE MINING CO.

Office: Challis. **Officers:** John Ostrom, Pres., May; Milton A. Brown, Sec.; Ed C. Salomon, Mgr., both of Challis. **Inc.:** Sept. 20, 1919. **Capital:** 1,000,000 shares; par value 10c.; 500,000 shares issued. **Property:** Silver Queen group; 5 unpatented claims, Yankee Fork dist.; Stanley. **Development:** Approximately 250 ft. of underground workings. **Ore:** Gold. **Remarks:** Small amount of development work was done during the year. The company reports a very substantial showing.

LUCKY STRIKE MINING CO. NO. 1

Office: Hollister. **Officers:** Henry Jones, Pres.; A. F. Craven, Sec., both of Hollister; Ora Jones, Mgr., Stanley. **Inc.:** April 27, 1917. **Capital:** 500,000 shares; par value \$1; 466,455 shares issued. **Property:** Lucky Strike group; Joe's Gulch, Stanley dist.; Stanley. **Development:** 3 tunnels totaling approximately 750 ft. **Plant:** 5-stamp mill, steam driven. **Remarks:** Small amount of development work done during the year.

MOUNT SULLIVAN MINING CO.

Office: Pocatello. **Officers:** J. J. Hull, Pres.; Joseph Munn, Sec., both of Pocatello. **Inc.:** June 26, 1920. **Capital:** 250,000 shares; par value \$1; 165,096 shares issued. **Property:** Mt. Sullivan group near the head of Alder Creek; 3 unpatented claims held under lease and bond from George W. Stuart, Alder Creek dist.; Mackay. **Development:** 1 tunnel, 670 ft. long. **Ore:** Lead-silver, Copper. **Men employed:** Average, 2.

ORELAND MINING CO.

Office: Kearns Bldg., Salt Lake City, Utah. **Officers:** F. A. Sweet, Pres.; J. H. Riddle, Sec., both of Kearns Bldg., Salt Lake City, Utah. **Inc.:** Feb. 9, 1918. **Capital:** 1,000,000 shares; par value \$1; 800,000 shares issued. **Remarks:** Owns or controls no mining property in Idaho.

PHEMSPACE MINES CO.

Office: 721 Seventh St., Rochelle, Ill. **Officers:** E. M. Wagner, Pres; P. A. Wagner, Sec., both of Rochelle, Ill. **Capital:** 1,000,000 shares; par value \$1; shares issued, unknown. **Property:** Phemspace group; 14 unpatented claims, Stanley dist.; Stanley. **Development:** By 5 tunnels, totaling approximately 1400 ft.

RAMSHORN MINES CO.

Office: 321 Felt Bldg., Salt Lake City, Utah. **Officers:** O. J. Salisbury, Pres.; C. B. Felt, Sec., both of Salt Lake City, Utah; G. A. Joslin, Mgr.; Frank Skeels, Mine Supt., both of Bay Horse. **Inc.:** July 14, 1919. **Capital:** 150,000 shares; par value \$10; all shares issued. **Property:** Ramshorn and Beardsley groups; 14 patented, 2 unpatented claims, Bay Horse dist.; Bay Horse. **Development:** Approximately 4 miles of underground workings with 5 intermediate levels. **Plant:** MINE: Laidlaw-Dunn-Gordon duplex 13x8x10 compressor, electrically driven; complete mine equipment and camp. MILL: 80-ton fine grinding flotation; gyratory crusher; primary and secondary rolls; ball mill; Dorr classifier; sand and slime tables; Fagergren and Janney flotation cells; American vacuum filter; dryer. Entire mill electrically driven. **Ore:** Silver-copper, lead. **Men employed:** Average, 65. **Remarks:** One of the largest and most consistent silver producers in the State. Capacity production was maintained throughout the year, and the new development work greatly enlarged the ore reserves.

SALMON RIVER MINING CO.

Office: c/o U. S. Trust Co., Terre Haute, Ind. **Officers:** John T. Beasley, Pres.; William K. Hamilton, Sec., both of Terre Haute, Ind. **Inc.:** July 6, 1910. **Capital:** 500,000 shares; par value \$1; 400,000 shares issued. **Property:** Pacific group; 12 patented claims, Bay Horse dist.; Bay Horse. **Remarks:** Idle for 10 years.

SAWTOOTH DREDGING CO.

Office: Twin Falls. **Officers:** H. U. Davis, Pres., Twin Falls; J. M. Willis, Sec., Berkeley, Cal.; R. P. Davis, Mgr., Buhl. **Inc.:** Jan. 3, 1920. **Capital:** 1,000,000 shares; par value \$1; 310,621 shares issued. **Property:** 10 unpatented placer claims; approximately 1200 acres; on Valley Creek, Stanley dist.; Stanley. **Plant:** Floating dredge: Hull, 100 feet long; 36 feet beam, drawing 4½ feet of water; 75 foot stacking ladder; 15 foot digging ladder; complete camp including cook and bunk house, store room, assay office and dwelling house. **Ore:** Placer gold. **Men employed:** Average, 6. **Remarks:** During the year new sluice boxes, riffles, jigs, stacking ladder, and other minor equipment was added to the dredge.

SEAFOAM GOLD MINING CO.

Office: Hailey. **Officers:** J. W. Skelton, Pres., Stanley; S. T. Hamilton, Sec., Twin Falls. **Inc.:** April 1, 1919. **Capital:** 1,000,000 shares; par value \$1; 75,654 shares issued. **Property:** 14 unpatented claims, Seafoam dist.; Stanley.

STANLEY MINES CORPORATION

Office: 915 Union Bank Bldg., Pittsburgh, Pa. **Officers:** R. N. Phillips, Pres., 627 Liberty Ave., Pittsburgh, Pa.; Ernest H. Browne, Sec., 915 Union Bank Bldg., Pittsburgh, Pa. **Inc.:** April 8, 1915. **Capital:** 150,000 shares; par value \$1; 106,600 shares issued. **Property:** Valley Creek group; 3 patented, 9 unpatented claims, Stanley dist.; Stanley.

SUNBEAM HOLDING CO.

Office: 501 Mining Exchange Bldg., Colorado Springs, Colo. **Officers:** G. A. von Brecht, Pres.; J. D. Fisher, Sec., both of Colorado Springs, Colo. **Inc.:** Dec. 7, 1915. **Capital:** 50,000 shares; par value \$1; 30,379 shares issued. **Property:** Sunbeam group; 5 patented, 13 unpatented claims, Yankee Fork dist.; Clayton. **Remarks:** In addition to the mining claims, this company also owns the large power plant on Salmon River, located at the mouth of Yankee Fork Creek known as the Sunbeam Dam. Property idle for many years.

UNITED METALS & POWER CORPORATION

Office: 702 Century Bldg., Pittsburgh, Pa. **Officers:** J. C. Hungerman, Pres., 1800 Pennsylvania Ave., Pittsburgh, Pa.; W. P. Fowler, Sec., Hailey. **Inc.:** Nov. 19, 1917, as Consolidated Mines Co., name changed May 12, 1919. **Capital:** 5500 shares; par value \$10; all shares issued. **Property:** Providence group; 15 unpatented claims, Seafoam dist.; R. R., Ketchum, 109 miles. **Development:** Approximately 1100 ft. of underground workings. **Ore:** Lead-silver-gold. **Men employed:** Average, 6. **Remarks:** Active development work was maintained throughout the year.

YANKEE FORK PLACER CO., LTD.

Office: 610 Overland Bldg., Boise. **Officers:** James H. Hawley, Pres.; Etheredge Walker, Mgr., both of Boise. **Inc.:** April 7, 1906. **Capital:** 400,000 shares; par value \$1; all shares issued. **Property:** Bonanza group; 5 patented placer claims; 320 acres on Yankee Fork Creek, Yankee Fork dist.; Clayton.

MINING INDUSTRY OF IDAHO

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Basin Creek Placer	Stanley Basin	W. K. Lynch	Stanley
Bellevue	Bay Horse	A. D. Sargent	Challis
Birdie Gr.	Seafoam	P. H. Rasche	Stanley
Black Daisy	Alder Creek	Geo. R. Morgan	Mackay
Blossom Placer	Yankee Fork	Peter Burch	Bonanza
Blue Jay	Alder Creek	A. W. Canady	Mackay
Buckskin	Alder Creek	H. P. Hunter	Mackay
Bull Dog	Seafoam	Charles Crane	29 S. W. Temple St. Salt Lake City
Carbonate	Alder Creek	Wm. Stevenson Est.	Mackay
Cash Box	Loon Creek	Geo. Bowden	Bonanza
Cave	Bay Horse	Chris Peterson	Bay Horse
Chas. Dickens	Yankee Fork	Chase Clark	Mackay
Columbia Standard	Alder Creek	George Manwarning	Salt Lake City, Utah
Compass	Bay Horse	D. Gekeler	Clayton
Copper Basin	Alder Creek	F. A. Stacy	Mackay
Copperpolls	Alder Creek	H. P. Hunter	Mackay
Democrat et al.	Bay Horse	Mrs. Lee Watson	Challis
Dewey	East Fork	Andrew Nielson	Obsidian
Dougherty	Bay Horse	E. A. Dougherty	Challis
Dryden	Bay Horse	E. D. Williams	Challis
Elkhorn Gr.	Seafoam	Joseph Singer	Boise
Enterprise	Yankee Fork	I. U. Hager	Mackay
Forest Rose	Bay Horse	Pietro Pedrini	Challis
Good Friend et al.	Bay Horse	John Ernst	Clayton
Greenhorn et al.	Seafoam	Chas. H. Smith	Stanley
Hohmann Placer	Stanley Basin	Walter K. Lynch	Stanley
Home Stake et al.	Bay Horse	James Beattie	Challis
International	Alder Creek	Thos. T. Donahue	Mackay
Joe's Gulch Placer	Stanley Basin	W. W. Smith	Stanley
Josephus Lake	Seafoam	E. H. Hasbrouck	224 E. Idaho St., Boise
Katherine	Bay Horse	C. A. Torrey	Clayton
Kelly Gulch Placer	Stanley Basin	Henry Sturkey	Stanley
Keystone	Bay Horse	Wilson & Fox	Challis
Kingfisher et al.	Yankee Fork	Frank G. Fisher	Obsidian
Little Johnny	Alder Creek	F. A. Stacey	Mackay
Livingston Gr.	Bay Horse	A. S. Livingston	351 Broadway, Denver, Colo.
Lost Eagle	Loon Creek	Carl Malm	Challis
Lost Packer	Loon Creek	Hanry Welsh	724 E. 2d St., Salt Lake City
Lucky Boy	Yankee Fork	W. S. McCornick	Salt Lake City, Utah
Mountain Girl	Stanley Basin	J. W. Thompson	Stanley
Mt. Sullivan No. 1	Alder Creek	G. W. Stewart	Mackay
Niagara	Seafoam	F. P. Richards	Mackay
Phi Kappa	Alto	C. E. Fishel	Mackay
Robinson Bar			
Dredge	Yankee Fork	Hoalt & Linqvist	Clayton
Rob Roy	Bay Horse	Caesar Maraffio	Clayton
Rough Creek	Yankee Fork	J. W. Friend	Clayton
Singer Gr.	Sheep Mountain	W. H. Brose	Boise
Snowdrift	Yankee Fork	Frank Casto	Challis
South Butte	Bay Horse	William McClure	Mackay
Sunrise et al.	Loon Creek	J. T. Metcalf	Clayton

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Taylor Gr.	Alder Creek	Taylor & Munson	Mackay
Tonopah	Robinson Bar	O. C. Beebe	Idaho Falls
Tracy et al.	Seafoam	A. R. Smith	Challis
Turtle	Bay Horse	N. S. Churchill	Mackay
Waxahachia	Alder Creek	S. W. Anderson	Mackay
Whynot	Yankee Fork	John and Amos Franklin	Clayton

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ELMORE COUNTY

The new dredge of the South Park Dredging Co. started digging on August 21, 1922, an important date for Elmore County and the State, as it represents the completion of one of the largest installations of its kind in the State, and an activity that adds greatly to the prosperity of this county, as well as being a material factor in attracting attention to its mineral resources and possibilities.

This county was once a noted producer of gold and silver, particularly at the time when the rich placer deposits of the Rocky Bar and Atlanta districts were being worked and later when the famous lode mines were in operation. When the placer ground that could be hydraulicked was exhausted and the quartz mines were closed through litigation and lack of power the production record dwindled to practically nothing. Adverse gold mining conditions have greatly retarded advancement during the past few years. The gradual disappearance of these hindrances and the possibility of the power line being extended from Featherville to Rocky Bar and Atlanta justifies the prediction that these districts will soon be restored to their former importance.

The Neal district, once an active gold camp, witnessed considerable new activity during 1922. This district has many deposits that are worthy of exploitation and modern metallurgical methods are such that it justifies more attention than it has been receiving.

In addition to gold (both placer and lode) silver, copper, lead, zinc, molybdenum and diatomaceous earth are found in this county. These resources and possibilities will eventually make Elmore one of the principal mining counties of the State.

BLACKSTONE MINING CO., LTD.

Office: 610 Overland Bldg., Boise. **Officers:** James H. Hawley, Pres.-Mgr.; Charles W. Mack, Sec., both of Boise. **Inc.:** Dec. 26, 1899. **Capital:** 1,000,000 shares; par value 10c.; all shares issued. **Property:** Blackstone group; 5 patented claims, Volcano dist.; Fairfield.

DALEY CONSOLIDATED MINES CO.

Office: Mountain Home. **Officers:** Daniel Reber, Pres.-Mgr., Mountain Home; E. H. Hough, Sec., 729 Mills Bldg., San Francisco, Cal. **Inc.:** Nov. 1, 1913. **Capital:** 1,500,000 shares; par value \$1; 1,200,000 shares issued. **Property:** Daley group; 51 unpatented claims, Pine Grove dist.; Bennett. **Development:** Approximately 4500 ft. of underground workings, the principal of which are a tunnel 1800 ft. long; a vertical shaft 100 ft. deep; and an inclined shaft 460 ft long with 5 intermediate levels. **Plant:** Two 40-h. p. boilers; steam driven hoist and compressor; complete mining equipment and camp. **Ore:** Lead-silver. **Remarks:** Assessment work only.

ELK CREEK PLACER CO.

Office: Idaho Falls. **Officers:** William D. Ebbert, Pres.-Mgr., Brigham City, Utah. **Inc.:** Dec. 14, 1918. **Capital:** 500,000 shares; par value 10c.; 297,000 shares issued. **Property:** 8 unpatented claims, Bear Creek dist.; Rocky Bar.

ELLA & EAGLE CONSOLIDATED GOLD MINING & DEVELOPMENT CO.

Office: Twin Falls. **Officers:** H. C. Reinke, Pres., Clover; Herman Schniger, Sec.; E. N. Herriott, Mgr., both of Twin Falls. **Inc.:** Sept. 7, 1916. **Capital:** 1,000,000 shares; par value \$1; 749,850 shares issued. **Property:** 15 unpatented claims, Bear Creek dist.; Rocky Bar. **Development:** Approximately 3300 ft. of underground workings, the principal of which is a tunnel 2300 ft. long. **Plant:** Gas driven compressor. **Remarks:** Idle.

GEORGE F. ROTH CO.

Office: Rochester, N. Y. **Officers:** George F. Roth, Pres.; Walter J. Duffy, Sec., both P. O. Box 147, Rochester, N. Y. **Inc.:** June 17, 1909. **Capital:** 2500 shares; par value \$1; 2102 shares issued. **Property:** Homestake group; 7 patented, 3 unpatented claims. Neal dist.; c/o Mayfield Stage, Boise. **Ore:** Gold. **Remarks:** Property under lease to Chas. Williams, who is actively engaged in development work, and who ran a small tonnage through the mill during the year.

GOLD MINES CO.

Office: 401 Chamber of Commerce Bldg., Spokane, Wash. **Officers:** J. W. Higgins, Pres.; H. G. Twomey, Sec., both of Spokane, Wash. **Inc.:** June 1, 1920. **Capital:** 1,500,000 shares; par value 10c.; 701,375 shares issued. **Property:** Ripper group; 2 patented, 2 unpatented claims, Bear Creek dist.; Rocky Bar. **Development:** Approximately 3000 ft. of underground workings.

IDAHO-FRANKLIN GOLD MINES

Office: 401 Chamber of Commerce Bldg., Spokane, Wash. **Officers:** John J. Stanford, Pres.-Mgr.; J. W. Higgins, Sec., both of Spokane, Wash. **Inc.:** May 21, 1921. **Capital:** 1,000,000 shares; par value, 25c.; 338,950 shares issued. **Remarks:** Company owns no mining property in Idaho.

MARSH CREEK MINING CO.

Officers: Roy Y. Bogard, Pres.-Mgr., Featherville; Curtis F. Pike, Sec., 1317 Idaho St., Boise. **Inc.:** July 9, 1921. **Capital:** 1,000,000 shares; par value \$1; 396,625 shares issued. **Property:** 7 unpatented claims on Marsh Creek, Bear Creek dist.; Featherville.

MINERVA MINING & MILLING CO., LTD.

Office: Atlanta. **Officers:** D. Ross Wynn, Pres.; Harry Jones, Sec., 730 Bake-well Bldg., Pittsburgh, Pa. **Inc.:** Aug. 1, 1908. **Capital:** 250,000 shares; par value \$1; all shares issued. **Property:** Minerva group; 6 patented, 3 unpatented claims, Middle Boise dist.; Atlanta. **Plant:** An old 20-stamp mill with concentrating tables. **Ore:** Gold. **Remarks:** Idle for a number of years.

OVERLOOK CONSOLIDATED MINING CO.

Office: Walla Walla, Wash. **Officers:** J. N. McCaw, Pres., Bellingham, Wash.; T. S. Steel, Sec., Walla Walla, Wash. **Inc.:** An association. **Capital:** 5,000,000 shares; par value \$1; 1,900,000 shares issued. **Property:** Overlook group; 15 unpatented claims. Black Warrior dist.; Atlanta. **Development:** Approximately 4000 ft. of underground workings. **Plant:** An old steam driven stamp mill. **Ore:** Gold. **Men employed:** 1 watchman.

RESCUE GROUP

Owner: John T. Hammac, R. D. No. 5, Boise. **Property:** 2 unpatented claims, Neal dist.; Mayfield. **Development:** 125 ft. drift on vein. **Plant:** Three 500 lbs. stamps in one mortar, gas driven. **Ore:** Gold. **Men employed:** Average, 2. **Remarks:** This property adjoins the Homestake group. A considerable tonnage of free milling gold ore was developed and the mill constructed during the year.

ROCKY BAR MINING CO.

Office: 1001 Paulsen Bldg., Spokane, Wash. **Officers:** M. G. Martindale, Pres.; J. M. Corbet, Sec., both of 1001 Paulsen Bldg., Spokane, Wash. **Inc.:** Sept. 18, 1922. **Capital:** 50,000 shares; par value \$1; shares issued none. **Property:** Republic group; 5 patented, 7 unpatented claims, owned by Mary A. Lison, 511 N. 10th St., Boise; held under lease and bond; Bear Creek dist.; Rocky Bar. **Plant:** Water driven 20-stamp mill; complete hand mining equipment and camp. **Ore:** Gold. **Men employed:** Average, 3.

SOUTH PARK DREDGING CO.

Office: 433 California St., San Francisco, Cal. **Officers:** W. P. Hammon, Pres.; A. E. Boynton, Sec., both of 433 California St., San Francisco, Cal.; R. W. Derby, Supt., Featherville. **Inc.:** Sept. 12, 1921 **Capital:** 50,000 shares; no par value; all shares issued. **Property:** 1150 acres of dredging land on Feather River, Featherville dist.; Featherville. **Plant:** Yuba dredge, 9 cu. ft. buckets, close connected. The hull is constructed entirely of Oregon fir, 105 ft. long with 44 ft. 7 in. beam, 10 ft. deep, drawing 7 ft. water. The bucket line is composed of 67 buckets connected with pins weighing 150 lbs. each; the buckets weigh approximately 2000 lbs. each. The digging ladder is of the plate girder type, 75 ft. long and weighs approximately 50 tons. The lower tumbler is round and spool shaped; the upper tumbler is hexagonal. The tailing stacker is 100 ft. long and provided with a 36 in. conveyor belt. The entire dredge is electrically driven, 520 h. p. being required, and is operated from the winch room. The pump capacity is 5000 gallons per minute. **Ore:** Placer gold. **Men employed:** Average, 20. **Remarks:** Construction work was started in October, 1921, and the dredge commenced digging on August 21, 1922; a very remarkable record, as the entire dredge had to be transported 43 miles over rough mountain roads. In addition to building the dredge, a power line 43 miles long from Mountain Home to the dredge was built. The entire plant, including power line, involved an expenditure of over half a million dollars before a wheel was turned. Since digging was started active operation has been maintained.

STARLIGHT MINING CO.

Officers: J. W. Baker, Pres.; C. H. Felton, Sec., both of 700 Idaho St., Boise. **Inc.:** July 1, 1920, charter forfeited Dec. 1, 1921. **Capital:** 100,000 shares; par value \$1; 70,000 shares issued. **Property:** Starlight group; 2 unpatented claims, Neal dist.; Thurman. **Development:** 1 tunnel 150 ft. long.

TAHOMA GOLD MINES CO.

Office: Atlanta. **Officers:** Robert L. Owen, Pres.; Henry G. Thomas, Sec., both of Senate Office Bldg., Washington, D. C. **Inc.:** Aug. 27, 1915. **Capital:** 1,250,000 shares; par value \$1; all shares issued. **Property:** Tahoma group; 3 patented, 1 unpatented claim, Middle Boise dist.; Atlanta. **Remarks:** Idle for a number of years.

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Ada Elmore Gr.	Bear Creek	Grant McCargo	Pittsburgh, Pa.
Baltimore et al.	Middle Boise	Robt. B. Browne	Atlanta
Benton Gr.	Middle Boise	Gill Bisby	Atlanta
Big Lode	Middle Boise	Frank T. Wyman	Boise
Bird Gr.	Pine Grove	Mrs. Alice M. Reecy	Mountain Home
Black Ribbon	Bear Creek	John Howard	Pine
Boise Bar Pl.	Middle Boise	Thomas Walker	Atlanta
Boise Rochester	Middle Boise	H. B. McGown	Atlanta
Bonaparte Gr.	Bear Creek	Rupert Winters	Featherville
Bowerman	Volcano	M. R. Wood	606 Marion St., Seattle, Wash.
Buckhorn	Twin Springs	J. N. Neinmier	Twin Springs
Capital Gr.	Middle Boise	Bell & Little	Atlanta
Commonwealth	Bear Creek	Walter Welch	Rocky Bar
Doolittle Gr.	Bear Creek	Elmer C. Towne	Rocky Bar
Eureka	Twin Springs	W. L. West	Twin Springs
Evlyn	Bear Creek	Marion House	Mountain Home
Forest King et al.	Bear Creek	Elizabeth Tregonning	Box 893, Boise
Gold Boy	Neal	C. H. Roberts	Boise
Gold Coin	Featherville	J. E. Sulloway	Featherville
Gold Eagle	Neal	C. C. Anderson	Boise
Gold King Gr.	Middle Boise	Harry Teskey	Atlanta
Gold Pan	Neal	William Burns	Boise
Green Mt. Gr.	Neal	John Hermo	Mayfield
Gunny Sack Gr.	Middle Boise	John Timmons	Atlanta
Hazel Queen	Middle Boise	L. N. Franke	Atlanta
Humming Bird	Middle Boise	Jas. A. Comer	Atlanta
Idaho Bonanza	Middle Boise	L. N. Franke	Atlanta
Jericho Gr.	Middle Boise	Fritz Scholl	Atlanta
Jingo & Hornet	Pine Grove	Mrs. J. M. Cowen	Mountain Home
Keirman Gr.	Bear Creek	Dan Kirby	Boise
Kitty Hicks	Neal	J. F. Wilson	Mayfield
Last Chance	Twin Springs	Cyrus H. Pickens	Twin Springs
Lucky Boy	Twin Springs	John Pfasser	Barber
Mary Ann	Bear Creek	Harry Fills	Rocky Bar
Middle Boise et al.	Black Warrior	Max Mayfield	Boise
Middle Boise Lode	Middle Boise	Thomas Walker	Atlanta
Midnight Placer	Snake River	H. S. Olson	Glenns Ferry
Minnehaha Placer	Bear Creek	Frank Galbraith	Rocky Bar
Monarch	Middle Boise	Dan Kirby	913 Hays St., Boise
Montezuma Placer	Middle Boise	Dick Miller	Atlanta
Mountain View	Pine Grove	Fred Skelton	Pine
New Century	Middle Boise	Henry Button	Atlanta
North Fork	Twin Springs	Frank Struckman	Barber
Northwestern	Bear Creek	W. N. Nixon	Rocky Bar
Old Oliver Diggins	Middle Boise	A. S. Longwill	Atlanta
Old Pioneer	Neal	Ralph Severs	Owyhee Hotel, Boise
Ontario	Bear Creek	Mary A. Lison	Boise
Ophir	Bear Creek	Elmer C. Towne	Rocky Bar
Overland et al.	Bear Creek	S. Howard	Pine
Owens Gr.	Pine Grove	Mrs. Jennie Potter	Pine

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Piney Gr.	Middle Boise	J. C. Birdwell	Atlanta
Pittsburgh Gr.	Bear Creek	Mrs. Emily Frew	Pittsburgh, Pa.
Pride of Atlanta Gr.	Middle Boise	Alfred Midwood	Butte, Mont.
Queen River Placer	Middle Boise	Fred Felix	Atlanta
Queen of the West	Bear Creek	John Sullivan	Rocky Bar
Red Warrior	Bear Creek	Frank Pon	Rocky Bar
Silver Horde	Middle Boise	W. T. Bennett	Atlanta
Stand Off	Bear Creek	V. O. Neiswander	Rocky Bar
Sunrise	Twin Springs	John Vaughn	Twin Springs
Sunrise Gr.	Bear Creek	Wm. H. Stowell	Spokane, Wash.
Sunrise Gr.	Neal	John T. Hammac	Boise
Tahoma	Middle Boise	Richards and Steunenberg	Boise
Uncle Ben	Bear Creek	B. J. Nurdyke	Featherville
Vibrator Gr.	Bear Creek	Elmer C. Towne	Rocky Bar
Vishnu et al.	Bear Creek	N. D. McLeod	Rocky Bar
White Bird et al.	Bear Creek	A. L. Beardon	Rocky Bar
Wide West	Bear Creek	John J. Allen	109 Montague St., Brooklyn, N. Y.
Willow Creek	Bear Creek	Chas. V. Price	Pine
Wonder	Pine Grove	Lou Roberts	Pine

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FREMONT COUNTY

The limited amount of prospecting that has been done in the northeast corner of this county has proven that considerable commercial coal exists. These coal beds are so far removed from transportation that they cannot be profitably exploited at the present time, but will eventually prove to be an important economic factor in the eastern part of the State.

Phosphate rock and oil shale deposits occur in a number of places, as well as magnesite and asbestos. These deposits have never been sufficiently developed to prove their extent, although worthy of investigation.

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GEM COUNTY

The continued lethargy in gold mining is still apparent in this county and the activities that were anticipated did not materialize, particularly in the Pearl (West View) district, which at one time was an important producer. Practically all of the old mines of this district were idle and no new undertakings were started during 1922. The sulphide ores of this district are amenable to treatment and many of the deposits are worthy of development. Considerable mining has been done on Squaw Creek, and in the past this district had a substantial production. The principal resources of these districts are: gold, silver, lead, zinc, and copper.

This county justifies more extensive exploitations and investigations than it has been receiving.

FELIX MINING CO.

Office: Boise. **Officers:** T. J. Jones, Pres.-Mgr., Boise. **Inc.:** July 25, 1917.

Capital: 5000 shares; par value \$10; all shares issued. **Property:** Felix group; 5 patented claims, West View dist.; Pearl.

GRANITE STATE CONSOLIDATED MINES CO.

Office: Pearl. **Officers:** W. C. Ware, Pres., Hamilton, Mass.; H. W. Dorman, Sec., Caldwell; C. C. Stinson, Mgr., Pearl. **Inc.:** June 23, 1914. **Capital:** 3,000,000 shares; par value \$1; 2,113,664 shares issued. **Property:** Granite State group; 20 patented, 17 unpatented claims, West View dist.; Pearl. **Development:** Over 10,000 ft. of underground workings, the principal of which is a main working tunnel 2350 ft. long which gives approximately 700 ft. vertical distance on the vein; 1 inclined shaft 355 ft. long. **Ore:** Gold. **Remarks:** Idle throughout the year.

IDAHO-APACHE SILVER MINING CO.

Office: Shaw Bldg., Boise. **Officers:** Frederick M. Shaw, Pres.-Mgr.; George B. Thomas, Sec., both of Boise. **Inc.:** Feb. 15, 1922. **Capital:** 1,000,000 shares; par value 50c.; 500,000 shares issued. **Property:** Apache group, held under lease and bond; 3 unpatented claims owned by James H. Hawley, Boise; West View dist.; Pearl. **Development:** 500 ft. of underground workings.

IDAHO MINING & PROMOTING CO., LTD.

Office: Weiser. **Officers:** Lot L. Feltham, Pres.-Mgr.; James T. Gallagher, Sec., both of Weiser. **Inc.:** Jan. 24, 1907. **Capital:** 25,000 shares, par value \$1; all shares issued. **Property:** Golden Age group; 2 patented claims, West View dist.; Montour. **Remarks:** Idle since 1912.

J. I. C. MINING CO., LTD.

Office: 1220 N. 11th St., Boise. **Officers:** J. C. Johnson, Mgr., Boise. **Capital:** 100,000 shares; par value \$1; shares issued none. **Property:** Mormon City group; 2 patented claims, West View dist.; Pearl.

JOHNSON GOLD MINING CO., LTD.

Office: 1220 N. 11th St., Boise. **Officers:** J. C. Johnson, Pres., Boise. **Inc.:** August 1, 1903. **Capital:** 300,000 shares; par value \$1; shares issued none. **Property:** Alexander; 1 patented claim, West View dist.; Pearl.

LITTLE PITTSBURGH GOLD MINING CO., LTD.

Office: Boise. **Officers:** H. J. Roan, Pres.-Mgr., Boise; C. M. Crandall, Sec., Vale, Ore. **Inc.:** July 1, 1905. **Capital:** 2,500,000 shares; par value \$1; shares issued, unknown. **Property:** Little Pittsburgh group; 1 patented, 1 unpatented claim, West View dist.; Pearl.

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Apache	West View	Jas. H. Hawley	Boise
Burton Bell	West View	John Ackley	Boise
Double Eagle Gr.	West View	Mrs. C. N. Boone	Box 1177, Boise
Hughes Creek Pl.	West View	F. W. Hunt	Emmett
I X L	West View	H. W. Dorman	Caldwell
Liberty	West View	I. W. Anderson	Sweet
Lincoln	West View	J. H. Richards	Boise
Mint	West View	J. E. Macauley	Pearl
North Basque	West View	J. C. Dunbar	Pearl
Red Cloud	West View	Henry Buell	Horseshoe Bend
Snyder Placer	West View	George F. Church	Emmett
Virginia Mines	West View	G. L. Loope	Seattle, Wash.

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GOODING COUNTY

Placer gold found in the gravel bars and sand along the Snake River constitute the only mineral resource of this county. These deposits are worked in a limited way and generally return the operator a fair profit on his labors.

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Big Body Placer	Snake River	John Criswell	Clear Lake
Black Butte Placer	Snake River	A. S. Madalena	Clear Lake
Boulder Hill Placer	Snake River	Charles N. Ingersoll	Bliss
Brown Placer	Snake River	C. E. Jenkins	Hagerman

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IDAHO COUNTY

Idaho County is one of the largest counties in the State in area, population, agricultural development, and extent of mineral resources. Its mineral resources are varied and diverse, being principally: Gold (placer and lode), silver, copper, lead, zinc, antimony, tungsten, monazite, rutile, asbestos, coal, and marble; the largest and most important of which is gold. At one time this county was a large gold producer, and within its borders lie the greatest undeveloped gold mining sections of any equal area in the United States.

Many fortunes have been made from the rich placer deposits of the Florence, Elk City, Newsome, Golden, Orogrande, Dixie, and Warren districts. The greater part of these placers that could be hydraulicked is exhausted, but in many of them large areas of land suitable for dredging are still available. Throughout these districts are numerous gold bearing veins; many of these veins carry free milling gold; others are free milling only for a limited distance near the surface; and a great many are base. Many plants have been built throughout the county on the assumption that all of the ore was amenable to free milling methods. These plants are monuments to the memory of improper direction and not to the failure of the properties. Many large deposits of low grade gold ore, which are amenable to modern metallurgical methods have been developed; these lack only proper direction, financing, and good roads to bring them to profitable production.

The lack of suitable roads is particularly evidenced by the inactivities of the Elk City, Newsome, Ten Mile, Orogrande, Dixie and Buffalo Hump districts. When these districts are served by a road that will permit economical transportation, their development will be rapid and profitable. The new road from Grangeville up the South Fork of the Clearwater River, which has been started and on which over a quarter of a million dollars has been spent, is one of the most worthy road projects started in the State in recent years and should be completed without undue delay. This road, beside opening up the resources of these districts, will be a necessary aid to the protection of the vast timber area through which it passes; will make accessible to the public a large playground of wonderful scenic beauty, in which are natural hot springs and unsurpassed hunting and fishing; and will mean a saving to the postal service of thousands of dollars each year through the reduction in the cost of transporting the mails.

During 1922 the principal gold mining operations were those of the Unity Gold Mines Co., and the Homestake Gold Mining Co., but a large number of the smaller operators greatly increased their activities over those of the previous year. The Harpster district had two companies actively engaged in development work, and two companies developing coal prospects were active throughout the year. These operations and the increase in prospectors and investigators looking for new properties, gave the county a considerable increase in activity over 1921. The principal outstanding events were the acquisition of the Walker-Wilcox group by E. E. Carter and associates, and the new gold discovery in the Dixie district.

The large low grade free milling gold deposits, the available dredging ground, the other mineral resources, the many undiscovered veins, and the abundant amount of available hydroelectric power makes this county an exceptional field.

ALTA-IDAHO GOLD & COPPER MINING CO.

Officers: M. C. Hetler, Pres., Berwick, Pa.; James H. Fine, Sec., Scotrun, Pa.; George M. Snyder, Mgr., Pardee. **Inc.:** June 17, 1903. **Capital:** 1,000,000 shares; par value \$1; 755,207 shares issued. **Property:** Empire group; 11 unpatented claims, on South Fork of Clearwater River, Lolo dist.: Pardee. **Development:** Approximately 400 ft. of underground workings, the principal of which is one tunnel 250 ft. long.

BIG THREE GOLD MINING CO.

Office: Grangeville. **Officers:** James G. Irvin, Pres.-Mgr., Grangeville; W. H. Baldwin, Sec., 1925 Third Ave., Seattle, Wash. **Inc.:** Feb. 17, 1919. **Capital:** 1,000,000 shares; par value 25c; 523,635 shares issued. **Property:** Big Three group, located 5 miles south of Florence; 5 unpatented claims, Florence dist.; Grangeville. **Development:** 1 tunnel, 600 ft. long; 1 tunnel 90 ft. long. **Plant:** A 1-stamp mill driven by Pelton water wheel. **Ore:** Gold.

BLACKTAIL MINING CO.

Office: 4023 E. 28th Ave., Spokane, Wash. **Officers:** R. E. Wakeley, Pres.-Mgr., 451 Sylvan Ave., Hillyard, Wash.; N. L. Wakeley, Sec., 4023 E. 28th Ave., Spokane. **Inc.:** Dec. 3, 1914. **Capital:** 200,000 shares; par value \$1; 121,920 shares issued. **Property:** 10 unpatented claims, Harpster dist., Harpster. **Development:** By 2 tunnels, No. 1, 300 ft. long; No. 2, 60 ft. long. **Ore:** Gold. **Remarks:** Assessment work only.

BLUE JACKET MINING COMPANY OF DELAWARE

Office: 213 St. Paul Place, Baltimore, Md. **Officers:** Francis T. Homer, Pres.; Elsie Metzler, Sec., both of Baltimore, Md.; Frank E. Johnesse, Mgr., Empire Bldg., Boise, Idaho. **Inc.:** May 20, 1909. **Capital:** 3000 shares; par value \$10; all shares issued. **Property:** Blue Jacket group; 7 patented claims, Crooks Corral dist.; Lucile. **Development:** Approximately 3600 ft. of underground workings. **Ore:** Copper. **Remarks:** Idle for a number of years.

CENTRAL IDAHO GOLD MINES CO.

Office: Spokane, Wash. **Officers:** Joseph Pelikan, Pres.-Mgr.; R. H. Hutchinson, Sec., both of Spokane, Wash. **Inc.:** Unknown. **Capital:** 1,500,000 shares; par value \$1; 130,000 shares issued. **Property:** Jefferson group; 8 unpatented claims, Robins dist. (Buffalo Hump); Orogrande. **Remarks:** Assessment work only.

COMMODORE GOLD MINING CO.

Office: Lewiston. **Officers:** Wm. C. McNutt, Pres.-Mgr.; M. R. Morgan, Sec., both Lewiston. **Inc.:** March 28, 1921. **Capital:** 1,000,000 shares; par value \$1; 194,450 shares issued. **Property:** Commodore group; 46 unpatented claims, at junction of Crooked River and south fork of Clearwater River; Orogrande dist.; Elk City.

CROOKS CORRAL MINES, LTD.

Office: Grangeville. **Officers:** Frank McGrane, Pres.; A. F. Parker, Sec.; W. W. Brown, Mgr., all of Grangeville. **Inc.:** Sept. 13, 1897. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** 8 patented placer claims, Crooks Corral dist.; Lucile.

ECHO MINING & DEVELOPMENT CO.

Office: 221½ N. Stevens St., Spokane, Wash. **Officers:** R. H. Hutchinson, Pres., 310 Hyde Bldg., Spokane, Wash.; Edward A. Pederson, Sec., 1023 W. Jackson Ave., Spokane, Wash.; W. H. Purcell, Mgr., Riggins. **Inc.:** May 3, 1919. **Capital:** 1,500,000 shares; par value 5c; 553,000 shares issued. **Property:** Echo group; 11 unpatented claims, Rapid River dist.; Riggins.

GAIETY MOUNTAIN GOLD MINES CO.

Office: Dewey-Scales Bldg., Nampa. **Officers:** D. L. Rhodes, Pres., Nampa; C. C. Roeder, Sec., New York City. **Inc.:** Jan. 2, 1921. **Capital:** 1,200,000 shares; par value \$1; 345,247 shares issued. **Property:** Gaiety group; 35 unpatented claims, Warren dist.; Warren. **Development:** Approximately 1100 ft. underground workings, principally tunnels. **Plant:** Small Huntington mill driven by 20 h. p. gas engine. **Ore:** Gold. **Men employed:** Average, 4. **Remarks:** During the year the mill was installed and completed, and a small amount of development work was done on the claims.

GOLD ZONE MINING & MILLING CO., LTD.

Office: Grangeville. **Officers:** W. W. Brown, Pres.; Frank Van Deventer, Sec., both of Grangeville; J. J. Schoner, Mgr., Elk City. **Inc.:** Feb. 9, 1919. **Capital:** 1,000,000 shares; par value 5c; 530,000 shares issued. **Property:** Grangeville group; 10 unpatented claims, Elk City dist.; Elk City. **Development:** Approximately 600 ft. of underground workings, the principal of which is a tunnel 400 ft. long. **Ore:** Gold. **Men employed:** Average, 1.

GOODENOUGH UNITED MINING & MILLING CO., LTD.

Office: Weiser. **Officers:** L. I. Purcell, Pres.; O. A. West, Sec., both of Weiser. **Inc.:** Nov. 1, 1905. **Capital:** 1,000,000 shares; par value 25c; 560,000 shares issued. **Property:** Goodenough group; 10 patented claims, Marshall Lake dist.; Burgdorf. **Remarks:** Idle many years.

HOLTE MINING CO.

Office: Caldwell. **Officers:** Leif T. Holte, Pres.-Mgr., Burgdorf; J. B. Gowen, Sec., Caldwell. **Inc.:** Jan. 12, 1920. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** Holte group; 10 unpatented claims, Marshall Lake dist.; Burgdorf. **Development:** Approximately 2700 ft. of underground workings, the principal of which are 4 tunnels; No. 1, 400 ft. long; No. 2, 1200 ft. long; No. 3, 400 ft. long; No. 4, 400 ft. long; 1 vertical shaft 150 ft. deep. **Plant:** MINE: steam driven compressor, complete mining equipment, sawmill, assay office and complete camp. MILL: 50-ton steam driven Lane Chilean mill; Cyanide plant. **Ore:** Gold. **Men employed:** Average, 2. **Remarks:** Through disagreement and lack of finances the property was idle throughout the year.

HOME MINING & MILLING CO., LTD.

Office: 517 Empire Bldg., Boise. **Officers:** S. J. Dunlap, Pres., 1220 N. 18th St., Boise; Wm. Shaw, Sec., 1411 Grove St., Boise. **Inc.:** May 1, 1911. **Capital:** 2,500,000 shares; par value 1c.; 1,579,000 shares issued. **Property:** 3 unpatented claims, Warren dist.; Warren.

HOMESTAKE GOLD MINING CO.

Office: 712 Peyton Bldg., Spokane, Wash. **Officers:** E. W. Condit, Pres., Elk City; W. H. Jones, Sec., 712 Peyton Bldg., Spokane, Wash.; A. W. Boyd, Mgr., Elk City. **Inc.:** Jan. 7, 1919. **Capital:** 250,000 shares, par value \$1; 198,884 shares issued. **Property:** Homestake group; 16 claims, Orogrande dist.; Elk City; American Eagle group; 16 patented claims, Elk City dist.; Elk City. **Development:** Over 6000 ft. of underground workings on both groups. **Plant:** American Eagle group: MINE: steam and water driven compressor; complete mining equipment and camp; MILL: steam driven 10-stamp mill with concentrating tables. **Ore:** Gold. **Men employed:** Average, 10. **Remarks:** This company was actively engaged in developing the American Eagle group throughout the year. This work consisted principally of driving a large lower tunnel whose portal is at the mill. This tunnel will open the vein at an additional depth and should be completed early in 1923, at which time production will be resumed.

IDAHO BUSTER MINING CO., LTD.

Office: 1022 Crocker Bldg., San Francisco, Cal. **Officers:** F. W. Bradley, Pres.; J. S. Wallace, Sec., both of 1022 Crocker Bldg., San Francisco, Calif. **Inc.:** Dec. 9, 1908. **Capital:** 300,000 shares; par value \$1; all shares issued. **Property:** Idaho Buster group; 7 patented, 4 unpatented claims, Elk City dist.; Elk City. **Remarks:** Idle since November, 1909.

IDAHO-COMSTOCK

Office: 803 Leary Bldg., Seattle, Wash. **Inc.:** An association. **Officers:** Thos. H. Minier, Pres.-Mgr., 4315 N. 35th St., Tacoma, Wash.; Chas E. Shephard, Sec., 803 Leary Bldg., Seattle, Wash. **Capital:** 2,000,000 shares; no par value; all shares issued. **Property:** Idaho-Comstock group; 14 unpatented claims, Dixie dist.; Dixie. **Development:** 3 tunnels: No. 1, 700 ft. long; No. 2, 200 ft. long; No. 3, 200 ft. long; 1 shaft 140 ft. deep. **Ore:** Gold.

IDAHO & NEVADA MINING CO.

Office: 66½ Sixth St., Portland, Ore. **Officers:** J. A. Fields, Pres.-Mgr., Elk City; Dora Saltus, Sec., Sherwood, Ore. **Inc.:** Aug. 23, 1920, charter forfeited Dec. 1, 1921. **Capital:** 5,000,000 shares; par value 5c; 349,775 shares issued. **Property:** 6 claims, Elk City dist.; Elk City. **Development:** 2 tunnels: 7 shafts. **Plant:** MINE: Steam driven hoist; MILL: 2 stamps, steam driven. **Ore:** Gold. **Men employed:** Average, 2.

INTERNATIONAL GOLD MINING & MILLING CO.

Officers: D. Miloradovich, Pres., New York City; N. Johnson, Sec., 803 W. 1st Ave., Spokane, Wash.; Frank Sockolick, Mgr., Kellogg, **Inc.:** April 17, 1913. **Capital:** 1,000,000 shares; par value 1c.; 681,517 shares issued. **Property:** 2 patented claims, Orogrande dist.; Orogrande.

JUMBO MINING & MILLING CO., LTD.

Office: Lewiston. **Officers:** J. C. Jansen, Pres., Lewiston Orchards; W. E. Howard, Sec.-Treas., Pamona, Cal. **Property:** Jumbo group; 5 patented claims, Robins dist.; Orogrande.

LAWYERS CANON COAL MINING CO.

Office: Green Creek. **Officers:** C. J. Matthews, Pres.-Mgr., Green Creek; Clark J. Matthews, Sec., Walla Walla, Wash. **Inc.:** May 31, 1921. **Capital:** 300,000 shares; par value \$1; all shares issued. **Property:** Coal mining rights on 270 acres, unorganized dist.; Winona. **Development:** 1 tunnel, 50 ft. long. **Mineral sought:** Coal. **Men employed:** Average, 2.

MCKINLEY GOLD MINING CO.

Office: Kellogg. **Officers:** P. P. Weber, Pres.; A. H. Polson, Sec., both of Kellogg. **Inc.:** Dec. 29, 1899. **Capital:** 1,500,000 shares; par value \$1; 953,858 shares issued. **Property:** McKinley group; 4 patented, 2 unpatented claims, Simpson dist.; Lucile. **Development:** 2 tunnels: No. 1, 145 ft. long; No. 2, 944 ft. long. **Ore:** Gold. **Remarks:** Assessment work only on unpatented claims.

MINERAL ZONE MINE

Owner: J. L. L. Baskett, Elk City. **Property:** Mineral Zone group; 8 unpatented claims, Elk City dist.; Elk City. **Development:** By one inclined shaft, 160 ft. long, opening the vein 150 ft. vertically; 3 intermediate levels with approximately 1000 ft. of drifting. **Plant:** MINE: Steam driven hoist and pumps. MILL: 3-stamp Merrill mill; crusher; and concentrating table; steam driven. **Ore:** Gold. **Men employed:** Average, 2. **Remarks:** Considerable free milling gold ore has been blocked out, but as it requires all the money the owner has available to keep the mine unwatered, little development work can be done.

OROGRANDE GOLD MINING CO.

Office: 219 Columbia Bldg., Spokane, Wash. **Officers:** J. N. Pickrell, Pres., Colfax, Wash.; J. E. Pickrell, Sec., Spokane, Wash.; William Hogan, Supt., Orogrande. **Inc.:** March 14, 1919. **Capital:** 3,000,000 shares; par value \$1: 1,852,132 shares issued. **Property:** Orogrande group; 5 patented, 31 unpatented claims. Orogrande dist.; Orogrande. **Development:** Approximately 6000 ft. of underground workings and 4,000 ft. of surface cuts on all claims. **Plant:** Stamp mill with partly completed cyanide plant; water driven. **Ore:** Gold. **Men employed:** One watchman. **Remarks:** Idle.

PUEBLO MINING CO.

Office: 711 Colorado Bldg., Washington, D. C. **Officers:** C. T. McCoy, Pres.; John T. McCoy, Sec., both of Washington, D. C. **Inc.:** Feb. 8, 1904. **Capital:** 3,000,000 shares; par value \$1. **Remarks:** Company owns no mining property in Idaho.

RAPID RIVER MINING & MILLING CO.

Office: Genesee. **Officers:** D. Sharnhorst, Pres.; G. E. Taber, Sec., both of Genesee. **Inc.:** July 14, 1910. **Capital:** 1,500,000 shares; par value \$1; shares issued, unknown. **Property:** Rapid River group; 5 unpatented claims, Rapid River dist.; Riggins. **Development:** Approximately 1300 ft. of underground workings.

REVENUE MINING & MILLING CO.

Office: 411 Kuhn Blk., Spokane, Wash. **Officers:** J. E. McCormack, Pres.; Walter Guthridge, Sec.-Treas., both of 411 Kuhn Blk., Spokane, Wash. **Inc.:** April 10, 1912. **Capital:** 500,000 shares; par value \$1; 391,693 shares issued. **Property:** Revenue group; 8 patented claims, Elk City dist.; Elk City.

RICE MINING & MILLING CO.

Office: 302 Main St., Lewiston. **Officers:** F. S. Rice, Pres.-Mgr.; E. P. Adkison, Sec., both of Lewiston. **Inc.:** April 8, 1920. **Capital:** 1,000,000 shares; par value \$1; 62,000 shares issued. **Property:** Columbia Hill group; 7 unpatented claims, Orogrande dist.; Orogrande. **Development:** Approximately 1600 ft. of underground workings.

SOUTH FORK MINING & MILLING CO.

Office: 401 Chamber of Commerce Bldg., Spokane. **Officers:** Wm. H. Stowell, Pres.-Mgr.; J. W. Higgins, Sec., both of Spokane. **Inc.:** June 4, 1914. **Capital:** 1,500,000 shares; par value \$1; 956,666 shares issued. **Property:** South Fork group; 12 unpatented claims, Elk City¹ dist.; Elk City. **Development:** Approximately 3500 ft. of underground workings, the principal of which are No. 1 tunnel, 1200 ft. long; No. 2, 1000 ft. long; No. 3, 1000 ft. long. **Remarks:** Assessment work only.

SUMMIT FLAT MINING CO.

Office: Hutton Bldg., Spokane, Wash. **Officers:** D. H. B. Phillips, Pres., Rosalia, Wash.; Ralston McCaig, Sec., Hutton Bldg., Spokane, Wash. **Inc.:** An association. **Capital:** 1,000,000 shares; par value \$1; 650,000 shares issued. **Property:** Summit Flat group; 5 unpatented claims, Orogrande dist.; Orogrande. **Development:** 1 tunnel, 1100 ft. long; 1 vertical shaft, 125 ft. deep. **Ore:** Gold. **Men employed:** Average, 2.

SWASTIKA MINES CORPORATION

Office: Dixie. **Officers:** A. H. McKnight, Pres.-Mgr., Dixie; Miss F. T. Bannon, Sec., Baltimore, Md. **Inc.:** May 20, 1918. **Capital:** 500,000 shares; par value \$1; 308,585 shares issued. **Property:** Swastika group; 8 unpatented claims, Dixie dist.; Dixie. **Development:** By 3 tunnels: No. 1, 60 ft. long; No. 2, 500 ft. long; No. 3, 500 ft. long. **Ore:** Gold.

SYLVANITE GOLD COPPER CO.

Office: Box 1055, Spokane, Wash. **Officers:** Wesley L. Wakeley, Pres.-Mgr.; May E. Wakeley, Sec., both Spokane, Wash. **Inc.:** Aug. 20, 1919. **Capital:** 100 shares; par value \$100; all shares issued. **Property:** Maud Randall group; 5 unpatented claims, 2 of which are held under lease and bond from Joseph Himmelspak of Grangeville, Harpster dist.; Harpster. **Development:** By 2 tunnels: No. 1, 65 ft. long; No. 2, 475 ft. long. **Plant:** Gas driven Gardner-Ricks 6x6 compressor; complete mining equipment. **Ore:** Copper. **Men employed:** Average, 2. **Remarks:** This company was engaged in active development work throughout the year.

TRI-METALLIC MINING CO., LTD.

Office: Pardee. **Officers:** Harry F. Bethman, Pres.; F. M. Bethman, Sec., both of Pardee. **Inc.:** Sept. 26, 1917. **Capital:** 250,000 shares; par value \$1; 134,608 shares issued. **Property:** 5 unpatented claims on South Fork of Clearwater River, Lolo dist.; Pardee. **Development:** 1 tunnel, approximately 800 ft. long. **Plant:** Small gas driven compressor. **Ore:** Copper-gold. **Men employed:** Average, 1.

UNITY GOLD MINES CO.

Office: 120 Broadway, New York City. **Officers:** James H. Hawley, Pres., Boise; E. C. Christensen, Sec., 120 Broadway, New York City; J. A. Czizek, Mgr., Warren. **Inc.:** May 25, 1916. **Capital:** 500,000 shares; par value \$1; 375,000 shares issued. **Property:** Little Giant and Rescue groups; 8 patented, 3 unpatented claims, Warren dist., Warren. **Development:** Approximately 8500 ft. of underground workings, the principal one of which is the main operating tunnel, which is over 4,000 ft. long. **Plant:** MINE: Storage battery locomotive haulage; electrically driven compressors; and complete mining equipment. MILL: 50-ton stamp mill; complete mine buildings and camp. Two hydroelectric power plants. **Ore:** Gold. **Men employed:** Average, 18. **Remarks:** One of the principal operating gold mines of Idaho. In addition to

doing over 2300 ft. of new development work, considerable ore was milled during the year. Surveys were completed and power site and equipment purchased for the installation of a 600 h. p. hydroelectric plant on the South Fork of the Salmon River.

WALKER-WILCOX AND STANDISH GROUPS

Property: Held under lease and option by E. E. Carter and Leif T. Holte of Burgdorf and Frank Hanchett of Lowell, Massachusetts; Marshall Lake dist.; Burgdorf. **Remarks:** In addition to lease and option these operators have a right of way through the principal tunnel of the Holte Mining Company and a lease on its surface plant and mill. The property was acquired during the latter part of the year and active development work through the Holte tunnel was maintained with a force of 20 men.

WONDER GOLD MINING CO.

Office: Grangeville. **Officers:** B. F. Pennington, Pres., Patterson, Wash.; W. L. Campbell, Sec., Grangeville. **Inc.:** May 13, 1915. **Capital:** 1,500,000 shares; par value \$1; 954,031 shares issued. **Property:** Wonder group; 7 unpatented claims, Ten Mile dist.; Golden. **Development:** Approximately 1300 ft. of underground workings consisting principally of 3 tunnels. **Plant:** Equipment for 10-stamp mill purchased but not installed. **Ore:** Gold. **Remarks:** Assessment work only.

WOOD OIL CO.

Office: 302 Main St., Lewiston. **Officers:** George Wood, Pres.-Mgr., 10th St., Clarkston, Wash.; F. S. Rice, Sec.-Treas., Lewiston. **Inc.:** Sept. 25, 1920. **Capital:** 150,000 shares; par value \$1; 176 shares issued. **Property:** Mineral rights to 48 acres at Pittsburgh Landing; White Bird. **Development:** 700 ft. well. **Plant:** Steam driven Keystone rig. **Mineral sought:** Oil and gas.

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Alberta	Elk City	E. J. Connley	Elk City
Americanus	Marshall Lake	Ed Luzadder	Burgdorf
Americus	Cottonwood Buttes	J. W. Bartlett	Greencreek
Annie Laurie et al.	Florence	S. A. Deflong	Grangeville
Apex	Florence	Anderson & Seaberg	Florence
Arles	Warren	Kelley & Patterson	Warren
Bauer Gr.	Elk City	Frank Bauer	Elk City
Bear Track	Florence	H. K. Moore	Birmingham
Bengal	Elk City	Perry Bros.	Elk City
Bevier Placer	Florence	Wm. D. Bevier	Elk City
Big Buffalo	Robins	M. J. Sweeney	Spokane, Wash.
Big Four	Warren	Patterson Bros.	Warren
Black Bear	Cottonwood Buttes	L. J. Anderson	Woodland
Bluebird	Warren	Walter B. Martin	Warren
Blue Ribbon	Elk City	J. E. Brown	Elk City
B. & M. Mine	Elk City	John Montgomery	Elk City
Bonanza Placer	Elk City	Fredrick Gribi	1546 Toberman St., Los Angeles, Cal.
Bonanza Placer	Simpson	Hart & Richardson	1078 Stratton St., Portland, Ore.
Brown Gr.	Warren	Frank H. Brown	Warren
Buck Diggins Pl.	Warren	John Becker	Warren
Buck Meadows Pl.	Unorganized	George Davis	Grangeville

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Buster et al.	Dixie	Oscar Waller	Warren
Buttercup Gr.	Florence	Samuel Dunn	Grangeville
Cape Horn	Camp Howard	C. H. Lyons	White Bird
Carson Placer	Warren	Frank Carson	Warren
Center Star	Elk City	Herman Brown	Elk City
Chicago et al.	Elk City	R. Greckwell	Elk City
Cleveland	Elk City	S. W. Smith	Palo Alto, Cal.
Coeur d'Alene	Ten Mile	Peter Proulix	Golden
Concord Gr.	Robins	Galen L. Stone	Boston, Mass.
Cove Placers	Clearwater	M. B. Geary	Grangeville
Crescent Placer	Orogrande	Geo. P. Kelley	Newsome
Crooked River Placer	Elk City	George Brown	Orogrande
Dandy Placer	Simpson	E. W. Butcher	Lucile
Deadwood	Elk City	Chas Forman	Los Angeles, Cal.
Diamond Hitch	Orogrande	Orin Lamb	Orogrande
Discovery	Maggie Creek	W. E. Smith	Los Angeles, Cal.
Eagle	Warren	Gus Kupper	Warren
Erickson Placer	Elk City	Peter Erickson	Elk City
Evergreen Gr.	Harpster	Albert Kincaid	Grangeville
Florence	Florence	A. R. Smith	Spokane, Wash.
Fourth of July	Dixie	Thomas Pritchard	Dixie
Franklin	Ten Mile	A. S. Johnson	Golden
Free Gold	Dixie	Geo. L. Esh	Dixie
Frisco Mine	Elk City	E. J. Connley	Elk City
Gem & Midnight	Elk City	Thomas McArthur	Elk City
Gilt Edge	Ten Mile	Frank Osgood	Seattle, Wash.
Gold Dollar	Warren	M. W. Hubbard	New Meadows
Gold Dove	Elk City	Pat Brennen	Elk City
Gold Drop	Elk City	Geo. W. Widmeyer	Elk City
Golden Brown	Crooks Corral	Reville Johnson	Lucile
Golden Placer	Ten Mile	Edward Timm	Golden
Golden Rule	Maggie Creek	O. W. Montgomery	Kooskia
Golden Rule Placer	Elk City	Chas. Tiedeman	Elk City
Golden Rule Placer	Maggie Creek	A. E. Davis	Kooskia
Golden Rule Placer	Warren	F. T. Mathias	414 S. 3d St., Boise
Golden Scale et al.	Elk City	Wm. C. McNutt	Elk City
Gold King	Orogrande	Geo. Peterson	Newsome
Grangeville	Elk City	Joe Schoner	Elk City
Great Nuggett Placer	Simpson	Hart & Richardson	Lucile
Grey Pallor	Warren	W. T. Copenhaver	Warren
Gunboat Placer	Dixie	R. Burke	Dixie
Harris Gr.	Elk City	Harry Harris	Elk City
Hawkeye	Warren	J. T. Murphy	Warren
Headlight	Newsome	J. E. Davis	Newsome
Hercules	Elk City	Alex Hendrie	125 Kent St., Hamilton, Ont.
Iola	Orogrande	James H. Colgrave	Spokane
James Moore	Dixie	James Moore	Dixie
Jensen Mine	Big Creek	Jacob Jensen	Clover

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Jim Crow Placer	Simpson	Jacob Cassett	Lucile
Jupiter Group	Marshall Lake	Christ Arnold et al.	Burgdorf
Keystone	Warren	Anthony Mohr	Warren
Keystone Gr.	Orogrande	Edw. Hansen	Orogrande
Kimberly & Jewel	Marshall Lake	D. L. Roy	Burgdorf
Klondyke	Camp Howard	Geo. J. Burgund	Cottonwood
Knott & Delaware	Warren	James Long	Warren
Kramer Placer	Simpson	Marion Kramer	Lucile
Last Chance	Elk City	James P. Larson	Elk City
Last Chance	Florence	John Lamont	Grangeville
Liberty Bell et al.	Robins	E. M. Griffith	Grangeville
Lick Creek Placer	Elk City	Wm. Finley	Elk City
Lime Point	Simpson	Marion Kramer	Lucile
Little Leggat	Orogrande	Simpson & Overman	Newsome
L. & L.	Dixie	Louis Larson	Dixie
Local Option	Ten Mile	Frank McGrane	Grangeville
Lolo	Dixie	Don A. Burpee	Dixie
Lone Pine	Ten Mile	D. F. Morrow	Golden
Loper	Marshall Lake	George Loper	Burgdorf
Lot Lake et al.	Florence	Claud Flint	Florence
Lucky Ben	Warren	Jay A. Czizek	Warren
Lucky Strike	Warren	Grindle & Curtis	Warren
Lusitania	Cottonwood Buttes	J. W. Bartlett	Greencreek
Madre d'Ore	Elk City	S. W. Litchfield	Elk City
Malone Placer	Simpson	John Struck	Cottonwood
Mammoth	Newsome	W. H. Baldwin	Stites
Mascot et al.	Elk City	John Massam	Elk City
Mayflower	Warren	Patterson, Morris & Blake	Warren
Miller Creek Pl.	Florence	S. A. Moon	Florence
Mineral Zone et al.	Elk City	G. L. Baskett	Elk City
Minnehaha	Warren	Dr. G. M. Waterhouse	Weiser
Modoc	Marshall Lake	L. W. Wilcox	Burgdorf
Monadnock	Dixie	George O. Trader	Dixie
Monarch	Simpson	C. H. Prescott	Dixie
Monmouth	Dixie	J. L. Hayes	Dixie
Moose Creek Pl.	Newsome	W. H. Giles	Newsome
Mother Lode	Elk City	Geo. Brown	Orogrande
Mount Eureka	Warren	W. G. Cadby	Warren
Newsome Placer	Newsome	James Surridge	Harpster
Ohio Placer	Orogrande	George Overfield	Orogrande
Old-Channel Placer	Simpson	Currier Bros.	Riggins
Old Kentuck	Marshall Lake	Peterson & Spencer	Burgdorf
Olivia Gulch	Dixie	Henry S. Hazlitt	Dixie
Poorman	Dixie	Oscar Eakin	Dixie
Rainier Group	Warren	Gus Sindt	Warren
Rapid Creek	Warren	Frank Mitchell	Warren
Red Horse Placer	Elk City	Schuyler Simmons	Elk City

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Red Warrior	Orogrande	Frank Peck	Orogrande
Rescue et al.	Warren	A. R. Cruzen	Boise
Rigdon Placer	Warren	Geo. G. Rigdon	Meadows
Rocky Butte et al.	Cottonwood Buttes	J. L. Eckert	Cottonwood
Shamrock et al.	Marshall Lake	H. H. Hackett et al.	Burgdorf
Shissler Creek Pl.	Warren	H. Cook	Warren
Silver King	Warren	Sigo Myers	Savannah, Ga.
Skylark	Warren	Warren D. Smith	Warren
Smith Placers	Mount Idaho	R. T. Smith	Whitebird
South Fork	Elk City	Martin Heckman	Elk City
Spike Quartz	Elk City	James Hubbs	Elk City
Spring Bar Placer	Simpson	J. A. Carr	Lucile
Star	Florence	W. A. Nicodemus	Spokane, Wash.
Summit Flat	Ten Mile	Rolston McCaig	Spokane, Wash.
Syringa	Maggie Creek	J. M. Wisdom	Culdesac
Syringa	Orogrande	James Montgomery	Orogrande
Thompson Placer	Warren	Ah Sam	Warren
Three Mile Placer	Marshall Lake	Jensen Bros.	Burgdorf
Tippie Placer	Newsome	Geo. R. Curtis	Newsome
Tivola	Elk City	George Braig	Elk City
Twin Butte et al.	Orogrande	Frank M. Peck	Orogrande
Una Gr.	Ten Mile	Rolston McCaig	Spokane, Wash.
Umatila Gr.	Orogrande	Orin Lamb	Orogrande
Union Gr.	Orogrande	Robert Pulz	Orogrande
Venturé	Robins	A. G. Schultz	Jumbo
Walker & Wilcox	Marshall Lake	E. S. Walker	Burgdorf
War Eagle	Robins	Geo. J. Bancroft	220 Broadway, Denver, Colo.
Wilson	Newsome	A. E. Carpenter	Newsome

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KOOTENAI COUNTY

The principal mining district of this county is the Little North Fork of the Coeur d'Alene River. This district is an extension of the famous Coeur d'Alene district of Shoshone County, the rocks and the ore deposits of which are practically the same, but owing to the heavy overburden and the dense forest prospecting has always been very difficult. The other mining districts are Hayden Lake and isolated sections around Lake Coeur d'Alene; throughout which districts a considerable amount of prospecting and development work has been done.

The principal minerals in the order of their prominence are zinc, lead, silver, copper, gold, clay, and gem stones. As zinc is the most important and as the mining of this metal was unprofitable until the closing months of 1922, but little activity was recorded in this county during the year. However, as many factors causing the lethargy are rapidly disappearing, the outlook for the future is more encouraging.

CARIBOU MINING CO., LTD.

Office: Coeur d'Alene. **Officers:** G. R. Scott, Pres.-Mgr.; C. O. Sowder, Sec., both of Coeur d'Alene. **Inc.:** July 5, 1918. **Capital:** 1,500,000 shares; par value 10c; 1,122,900 shares issued. **Property:** Caribou group; 10 unpatented claims, Wolf Lodge, unorganized dist.; Coeur d'Alene. **Development:** Approximately 650 ft. of underground workings, the principal of which are No. 1 tunnel, 28 ft. long; No. 2 tunnel, 53 ft. long; and No. 3 tunnel 370 ft. long, giving approximately 500 ft. in depth on the vein. **Plant:** 6x6 gas driven compressor; complete mining equipment. **Ore:** Lead-silver. **Men employed:** Average 1. **Remarks:** Active development work throughout the year.

COEUR D'ALENE CLAY CO., LTD.

Office: 301½ Sherman Ave., Coeur d'Alene. **Officers:** Oscar Nelson, Pres.; H. H. Barton, Sec.-Treas, both of Coeur d'Alene. **Inc.:** April 6, 1912. **Capital:** 100,000 shares; par value \$1; 22,100 shares issued. **Property:** 40 acres patented land near Coeur d'Alene. **Plant:** One incomplete brick making machine, 20,000 brick capacity.

COEUR D'ALENE ROBISH MOUNTAIN MINING CO., LTD.

Office: Coeur d'Alene. **Officers:** Martin Robish, Pres.; Lawrence L. Lewis, Sec., both of Coeur d'Alene; Wm. M. Hill, Mgr., Spokane. **Inc.:** Oct. 9, 1909. **Capital:** 2,750,000 shares; par value \$1; 1,505,500 shares issued. **Property:** 505 acres patented land and 4 unpatented claims; Little North Fork dist.; Linfor. **Development:** Approximately 600 ft. of underground workings.

COEUR D'ALENE-SPOKANE MINING CO.

Office: Coeur d'Alene. **Officers:** Gustave Stroebel, Pres., Helena, Mont.; Roy L. Black, Sec., Boise. **Inc.:** Sept. 6, 1918. **Capital:** 1,000,000 shares; par value \$1; 500,000 shares issued. **Property:** 3 unpatented claims, unorganized dist.; Lane. **Development:** Principal development work consists of 1 tunnel, 600 ft. long. **Ore:** Lead-silver. **Remarks:** Assessment work only.

HAMBURG-AMERICAN COPPER MINING & MILLING CO.

Office: Kellogg. **Officers:** Wm. Schaeffer, Pres.-Mgr.; John A. Rock, Sec., both of Kellogg. **Inc.:** Nov. 30, 1908. **Capital:** 1,500,000 shares; par value \$1; 1,100,000 shares issued. **Property:** Hamburg group; 5 patented, 2 unpatented claims, Little North Fork dist.; Linfor. **Development:** One long tunnel and several open cuts. **Ore:** Lead-silver. **Men employed:** Average, 2. **Remarks:** During the year this company was successful in obtaining patent to its property over the protest of the U. S. Forest Service. This contest compelled the property to remain idle for a number of years, and with its successful termination for the company, active development work will again be resumed.

HAYDEN LAKE MINING & MILLING CO.

Office: Rathdrum. **Officers:** Fred H. Bradbury, Pres.-Mgr.; J. R. M. Culp, Sec., both of Rathdrum. **Inc.:** May 8, 1917. **Capital:** 500,000 shares; par value 5c.; 488,558 shares issued. **Property:** Bradbury group; Hayden Lake, unorganized dist.; Belmont. **Development:** 2 tunnels; No. 1, 160 ft. long; No. 2, 600 ft. long; 1 vertical shaft, 40 ft. deep. **Plant:** Gas driven compressor; complete mining equipment. **Ore:** Lead-silver, copper. **Men employed:** Average, 2.

HOME BUILDER MINING & DEVELOPMENT CO.

Office: 528 Hutton Bldg., Spokane, Wash. **Officers:** Frank M. Slagle, Pres.-Mgr., Pullman, Wash.; Leon G. Vogt, Sec., Spokane, Wash. **Inc.:** Aug. 13, 1903. **Capital:** 2,000,000 shares; par value 25c.; 722,000 shares issued. **Property:** Home Builder group; 6 patented, 33 unpatented claims, Wolf Lodge dist.; Coeur d'Alene. **Development:** Approximately 5000 ft. of underground workings. **Plant:** Gas driven compressor and buildings. **Ore:** Gold, silver, platinum and cobalt. **Men employed:** Average, 5.

IMPERIAL MINING & MILLING CO.

Office: Rockford Bay. **Officers:** S. W. Purdy, Pres.; J. T. Purdy, Sec.-Mgr., both of Rockford Bay. **Inc.:** July 6, 1906. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** White Knob group; 6 unpatented claims, Medimont dist.; Rose Lake. **Development:** One tunnel approximately 400 ft. long. **Ore:** Lead-silver. **Men employed:** Average, 2. **Remarks:** Small amount of development work done during the year.

INTERNATIONAL MINING & METAL CORPORATION

Office: 510 Empire State Bldg., Spokane, Wash. **Officers:** G. I. Hodges, Pres.; C. A. Gray, Sec.-Mgr., both of Spokane, Wash. **Inc.:** March 24, 1919. **Capital:** 7,500,000 shares; par value 10c.; 2,000,000 shares issued. **Property:** Inland group; 7 unpatented claims, Hayden Lake dist.; Hayden Lake. **Development:** By 2 tunnels: No. 1, 150 ft. long; No. 2, 300 ft. long. **Ore:** Lead-silver. **Remarks:** Assessment work only.

LITTLE NORTH FORK COPPER MINING & MILLING CO., LTD.

Officers: T. R. Mason, Pres., Kellogg. **Inc.:** Sept. 29, 1903. **Capital:** 1,500,000 shares; par value \$1; 1,200,000 shares issued. **Property:** Hand spike group; 10 unpatented claims, Little North Fork dist.; Linfor. **Development:** 2 tunnels; No. 1, 1600 ft. long; No. 2, 400 ft. long.

PALISADE MINING & MILLING CO.

Office: Coeur d'Alene. **Officers:** T. W. Schmidt, Pres.-Mgr., Cataldo; A. K. Rogers, Sec., Spokane, Wash. **Inc.:** Jan. 31, 1912. **Capital:** 1,500,000 shares; par value \$1; 1,442,378 shares issued. **Property:** Palisade group; 16 unpatented claims, unorganized dist.; Kellogg. **Development:** Approximately 960 ft. of tunnels, the principal of which is No. 2, 900 ft. long. **Plant:** 6x6 Gardner-Ricks gas driven compressor; 50-light electric generator driven by Pelton water wheel; complete mining equipment and buildings. **Ore:** Silver-lead. **Men employed:** Average, 3.

RED HORSE MINING CO.

Office: Harrison. **Officers:** M. W. Frost, Pres.; A. P. Drissen, Sec., both of Harrison; A. J. Raser, Mgr., Springston. **Inc.:** July 14, 1904. **Capital:** 1,500-000 shares; par value \$1; 901,685 shares issued. **Property:** Red Horse group; 18 unpatented claims, Lake Front dist.; Harrison. **Development:** Approximately 2600 ft. of underground workings. **Plant:** 40 h. p. F-M gas engine driving a two drill Sullivan compressor. Complete mining equipment and camp. **Ore:** Copper. **Men employed:** Average, 3.

RIVERSIDE COPPER MINING CO., LTD.

Office: Kellogg. **Officers:** T. R. Mason, Pres., Kellogg; S. S. Bonham, Sec., Wardner. **Inc.:** Sept. 17, 1906. **Capital:** 1,000,000 shares; par value \$1; 900,000 shares issued. **Property:** 5 patented claims, Little North Fork dist.; Linfor. **Development:** 1 tunnel 400 ft. long. **Ore:** Lead-silver.

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Lake et al.	Lakefront	George Strobel	Lane
Quebec	Medimont	Archille Fortier	Lane

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LATAH COUNTY

The principal mining activity of this county during 1922 was the manufacture of fire brick. Two companies had a large output and as the brick is of exceptional quality a large amount is used by the different smelters in the northwestern states.

The large deposits of high grade muscovite mica that are found in this county, from which many tons have been shipped, were idle through the year.

In addition to high grade fire clay and mica, copper, gold, and silver are also found. In the past considerable prospecting for and mining of these metals has taken place; other than assessment work but little interest was shown during 1922.

CASSIDY GOLD MINING & MILLING CO., LTD.

Officers: N. J. Stockbridge, Sec., Wallace. **Inc.:** March 12, 1899. **Capital:** 600,000 shares; par value 5c.; 437,000 shares issued. **Property:** Cassidy; 1 patented claim, Blackfoot dist.

COPPER CHIEF MINING & MILLING CO., LTD.

Office: Troy. **Officers:** Robert Olson, Pres.; Albert B. Olson, Sec., both Troy. **Inc.:** July 27, 1914. **Capital:** 1,000,000 shares; par value \$1; 430,575 shares issued. **Property:** Copper Chief group; 2 unpatented claims and 10 acres of deeded land, unorganized dist.; Troy. **Development:** 3 tunnels: No. 1, 250 ft. long; No. 2, 350 ft. long; No. 3, 540 ft. long.

GOLD NUGGET MINING CO.

Office: 788 E. 152d St., Cleveland, Ohio. **Officers:** W. D. Royce, Pres., 1807 Caldwell Ave., Cleveland Heights, Ohio; F. B. Garrett, Sec., 788 E. 152d St., Cleveland, Ohio. **Inc.:** Dec. 30, 1908. **Capital:** 1,500,000 shares; par value \$1; 611,000 shares issued. **Property:** In Hoodoo dist., Harvard.

MERGER MINING COMPANY, LTD.

Office: Palouse, Wash. **Officers:** J. C. Northrup, Pres.-Mgr.; C. E. Frederick, Sec., c/o Palace Store, Spokane, Wash. **Inc.:** Nov. 14, 1913. **Capital:** 3,750,000 shares; par value \$1; 3,383,018 shares issued. **Property:** Mizpah group; 20 unpatented claims, Hoodoo dist.; Harvard. **Development:** By 7 tunnels, approximating 3300 ft. **Plant:** One 12x14 and one 6x6 compressor, gas driven; complete mining equipment and camp. **Ore:** Copper. **Remarks:** Small amount of development work done during the year.

PACIFIC WHITE MICA CO.

Office: 309 Lyon Bldg., Seattle Wash. **Officers:** W. C. McAllister, Pres.; H. G. Wishaar, Sec., both of Seattle, Wash. **Inc.:** Dec. 24, 1913. **Capital:** 200,000 shares; par value \$1; 147,208 shares issued. **Property:** 160 acres held under contract of purchase from the State of Idaho; Avon. **Development:** 2 tunnels: No. 1, 220 ft. long; No. 2, 175 ft. long. **Mineral sought:** Mica. **Remarks:** Idle throughout the year.

TROY GOLD & COPPER MINING CO., LTD.

Office: Troy. **Officers:** E. J. Gimmill, Pres.-Mgr.; T. H. Christie, Sec., both of Troy. **Inc.:** May 26, 1909. **Capital:** 1,000,000 shares; par value \$1; 510,100 shares issued. **Property:** 20 acres patented homestead land held under deed from the homesteader. **Ore:** Copper-silver.

WASHINGTON MICA CO.

Office: 717 Riverside Ave., Spokane, Wash. **Officers:** Arthur H. Bentz, Pres., Avon; George H. Doerr, Sec.-Mgr., Spokane, Wash. **Inc.:** June 3, 1921. **Capital:** 400,000 shares; par value 25c.; 1,500 shares issued. **Property:** 120 acres held under contract of purchase from the State of Idaho. **Development:** Approximately 600 ft. of workings. **Mineral sought:** Mica.

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Annie Placer	Hoodoo	P. Doffner	Harvard
Brittan	Hoodoo	J. G. Northrop	Palouse, Wash.
Carrico Placer	Gold Hill	Paul Bockmier	Paulsen Bldg. Spokane, Wash.
Copper King	Hoodoo	Chas. W. Sanderson	Bovill
Gen. Jackson et al.	Gold Hill	Alec Holland	Potlatch
Hard Work	Hoodoo	George Steffen	Harvard
Iron Queen Group	Gold Hill	O. Henry	Palouse, Wash.
Liberty	Hoodoo	G. E. Arrasmith	Palouse, Wash.
O. K. Olsen	Troy	O. K. Olsen	Troy
Vira	Hoodoo	C. S. Saunders	Potlatch

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LEMHI COUNTY

Of all the counties in the State there is none with more varied resources, both mining and agricultural, than Lemhi. In this vast mountainous area are many streams and rivers flowing through broad, flat valleys where agriculture in all its different branches is profitably pursued. The crops varying from those that can be raised only at high altitude to those of a few feet above sea level. The mountains are comprised of practically all kinds of rocks ranging from early sedimentary to late igneous and include many altered phases of each. The different rocks are widely distributed through the entire area, and the diversity of the mineral resources is extensive as each particular variety of rock generally harbors a different mineral or minerals. The principal ones, in the order of their prominence are: lead, copper, silver, gold, zinc, tungsten, cobalt, nickel, molybdenum, manganese, coal, limestone, building stone and tin.

Lemhi has always been one of the most important mining counties in the State, its activities dating from the discovery in the early sixties of the rich placer deposits in the Blackbird, Gravel Range, Mackinaw, Carmen Creek, Kirtley Creek, Eldorado, and Pratt Creek districts to the present day operations of the deep lode mines, which are found in practically all of the many mining districts. Gold mining being unprofitable and lead and copper demanding low prices during 1921, the lowest production record for many years was had; but in 1922 the advance in value of the latter metals had a stimulating effect and this year witnessed a large increase in mining activities and production.

The mines in the Gilmore section, particularly those of the Pittsburgh-Idaho Co. and Latest Out Mining & Smelting Co., Ltd., are holding up under deep development; and their ore reserves and production were greatly augmented.

The Harmony Mines Co., whose property was closed down throughout 1921, resumed operations early in 1922 and maintained practically capacity production throughout the year. This mine is the largest copper producer and the most completely equipped property in Lemhi County. The Pope-Shenon mine, which has been closed down for a number of years, was leased to George A. and William M. Snow, who rearranged the mill and immediately put the property on a producing basis. These properties are the only ones operating throughout the extensive belt on which they are located. The area within which these mines are found will eventually become an important copper producing section.

During the year a small amount of prospecting and development was done in the Junction district, particularly at the lead mines near Leadore. These deposits are large shear zones, carrying a small percentage of lead and silver, and lack only proper direction, financing, and power; and when so equipped this district will be a large producer.

Considerable prospecting and development work was done in the Spring Mountain and Viola districts. A few carloads of ore were shipped and a number of very important new discoveries were made. These operations greatly increased the activity of the districts mentioned; some of the new disclosures appear to be substantial; and the increased interest shown indicates that the coming year will witness a large amount of new developments.

Gold mining remained quiet in this county throughout 1922, although more interest was evidenced than was shown in 1921, particularly in the Leesburg, Gibbonsville and Shoup districts, and on Big Eight Mile in the Junction district.

The discoveries in the new camp named Silverton, which is four miles east of Salmon on Jesse Creek, were actively developed; a small car of ore was shipped, and the indications are such that in all probability the county has a new district that will be of considerable importance in its future prosperity.

The extensive and varied resources, which are distributed over a large area; the many veins that have been discovered and developed; the many possibilities for new discoveries; together with the excellent mining conditions, make Lemhi County a very attractive field for the prospector or operator.

ALLIE MINING CO., LTD.

Office: Gilmore. **Officers:** Edgar C. Ross, Pres.-Mgr., Gilmore; Harry R. Hyde, Sec., Ridgeway, Pa. **Inc.:** Jan. 23, 1905. **Capital:** 30,000 shares; par value \$10; all shares issued. **Property:** Allie group; 6 patented claims, Texas dist.; Gilmore. **Remarks:** Idle since 1914.

BLACK PINE COPPER MINING & MILLING CO., LTD.

Office: 909 Republic Bldg., Kansas City, Mo. **Officers:** F. J. Fetter, Pres.; J. F. Sothoron, Sec., both 909 Republic Bldg., Kansas City, Mo. **Inc.:** Jan. 20, 1902. **Capital:** 40,000 shares; par value \$1; all shares issued. **Property:** 4 patented claims, Black Bird dist.; Salmon. **Remarks:** Idle for a number of years.

BLENWICK MINING CO., LTD.

Officers: R. E. Wickham, Pres.; E. H. Casterline, Sec., both Salmon. **Inc.:** May 22, 1919. **Capital:** 500,000 shares; par value \$1; all shares issued. **Property:** 6 unpatented claims, Eureka dist.; Salmon. **Development:** Approximately 1200 ft. of underground workings. **Plant:** 2 Nissen stamps, water driven. **Ore:** Gold. **Remarks:** Assessment work only.

BLUE WING TUNGSTEN MINING & MILLING CO.

Office: Patterson. **Officers:** Mark T. Lyon, Pres., 255 W. 95th St., New York, N. Y.; W. P. Barton, Sec., Patterson. **Inc.:** March 23, 1921. **Capital:** 15,000 shares; par value \$10; all shares issued. **Property:** Blue Wing group; 21 patented, 4 unpatented claims, held under lease and bond, owned by Ima Consolidated Mining & Milling Co., c/o Deseret Bank Bldg., Salt Lake City, Utah. **Development:** 2 tunnels; No. 1, 560 ft. long; No. 2, 820 ft. long; and 2 short shafts. **Plant:** Small concentrator including flotation. **Ore:** Tungsten, Copper-silver.

BOHANNON DREDGING CO.

Office: 1301 Trust Co., Bldg., Milwaukee, Wis. **Officers:** Gustave Pabst, Pres., H. H. Piltz, Sec.; Henry Danischefsky, Mgr., all of Milwaukee, Wis. **Inc.:** Jan. 29, 1914. **Capital:** 100 shares; par value \$100; all shares issued. **Property:** Bohannon group; 28 patented placer claims, approximately 2080 acres, Eldorado dist.; Salmon.

BUCHANAN GOLD MINING & LEASING CO.

Office: Ulysses. **Officers:** H. W. Soule, Pres.; James A. Herndon, Sec.; W. H. Buchanan, Mgr., all of Salmon. **Inc.:** March 27, 1919, charter forfeited Dec. 1, 1922. **Capital:** 1500 shares; par value \$100; all shares issued. **Property:** Ulysses group; 17 unpatented claims held under lease, Indian Creek dist.; Ulysses. **Development:** 3 tunnels totalling approximately 6000 ft. **Plant:** Water driven 5-stamp mill. **Ore:** Gold. **Remarks:** Operations suspended early in the year.

COMMUNITY COPPER COMPANY

Office: Boise. **Officers:** G. L. King, Pres., Ontario, Ore.; Wm. B. Davidson, Sec., Boise. **Inc.:** Sept. 2, 1920. **Capital:** 500,000 shares; par value 10c.; 257,850 shares issued. **Property:** Three Johns group; 5 unpatented placer claims, Kirtley Creek dist.; Salmon. **Remarks:** Assessment work only.

CONFIDENCE MINING CO.

Officers: W. H. Batson, Pres.; D. J. States, Sec., both of Moundsville, W. Va.; James G. Simms, Mgr., Salmon. **Inc.:** Dec. 30, 1911. **Capital:** 500,000 shares; par value \$1; 371,338 shares issued. **Property:** Confidence group; 8 unpatented claims, Kirtley Creek dist.; Salmon. **Development:** 4 tunnels totaling approximately 500 ft. **Plant:** Old water driven 5-stamp mill. **Ore:** Gold-copper-silver. **Men employed:** Average, 3.

DRILLING DEVELOPMENT CO.

Office: 507 Silver Bow Bldg., Butte, Montana. **Officers:** W. H. Penner, Pres., 201 Felt Bldg., Salt Lake City, Utah. **Remarks:** Property sold under receivership to Utana Mining Corporation.

GILMORE MINING CO.

Office: 222 Kearns Bldg., Salt Lake City, Utah. **Officers:** Edgar C. Ross, Pres.-Mgr., Gilmore; C. Warnock, Sec., 222 Kearns Bldg., Salt Lake City, Utah. **Inc.:** Feb. 3, 1913. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** Gilmore group; 12 patented claims, Texas dist.; Gilmore. **Development:** By 3 tunnels; No. 1, Roy Lauer, 650 ft. long; No. 2, Martha, 400 ft. long; No. 5, Transportation Tunnel, 5000 ft. long; 1 inclined shaft, 450 ft. long. Total development approximately 14,000 ft. **Plant:** Gas driven hoist. **Ore:** Lead-silver, gold. **Men employed:** Average, 3. **Remarks:** Small amount of development work throughout the year.

HARMONY MINES CO.

Office: Room 1016, 64 W. Randolph St., Chicago, Ill. **Officers:** A. W. Nieman, Pres.; Gladys Nieman, Sec., both of Chicago, Ill.; E. F. Nieman, Mgr., Salmon. **Inc.:** April 8, 1916. **Capital:** 3,000,000 shares; par value \$1; 2,050,000 shares issued. **Property:** Harmony group; 21 unpatented claims, Eldorado dist.; Baker. **Development:** By 5 tunnels; No. 1, 2000 ft. long; No. 2, 640 ft. long; No. 3, 210 ft. long; No. 4, 410 ft. long; No. 5, 1000 ft. long; and numerous small cuts and shafts totaling approximately 6000 ft. **Plant:** MINE: Two C-P electrically driven compressors; complete mining equipment and camp; two aerial tramways, one 2400 ft. long, the other 2800 ft. long, connecting the mine and mill; MILL: 175-ton concentrator, including flotation; primary and secondary crushers; Hardinge ball mill; two Dorr classifiers; 10 Wilfley tables; one 12 ft. and one 6 ft. K & K flotation cells; two Aikens classifiers. Built in 1919-20. All electrically driven. **Ore:** Copper. **Men employed:** Average, 35. **Remarks:** Operation was resumed early in 1922 and continued at capacity production throughout the year. This property is one of the most completely equipped mines and the largest producer of copper in Lemhi County.

HAYNES-STELLITE CO.

Office: 30 E. 42d St., New York City. **Officers:** B. O'Shea, Pres.; J. R. Knapp, Sec.; C. T. Ayres, Mgr., all of New York City. **Inc.:** Feb. 8, 1917. **Capital:** 7500 shares; par value \$100; 2250 shares issued. **Property:** Cobalt group; 10 patented, 24 unpatented claims, Blackbird dist.; Leesburg. **Development:** Two tunnels; No. 1, 440 ft. long; No. 2, 500 ft. long; and numerous crosscuts and raises totaling approximately 3600 ft. **Plant:** MINE: 200 cu. ft. gas driven compressor; gravity tramway. MILL: Small steam driven concentrator. **Ore:** Cobalt. **Remarks:** Idle throughout the year.

IDAHO COPPER MINES, INC.

Office: Boise. **Officers:** George A. Williams, Pres.; R. Dyke, Sec., both of Boise. **Inc.:** July 27, 1922. **Capital:** 500,000 shares; par value \$1; 5 shares issued. **Property:** 6 unpatented claims; Salmon.

IDAHO MINERALS CO., LTD.

Office: Box 541, Idaho Falls. **Officers:** Simon Martin, Pres.-Mgr., Lois Saar, Sec., both of Idaho Falls. **Inc.:** Aug. 13, 1919. **Capital:** 500 shares; par value \$100; 32 shares issued. **Property:** Red Warrior and Iron Mask groups, held under lease and bond; 14 unpatented claims, Spring Mountain dist.; Gilmore. **Development:** By 4 tunnels: No. 1, 750 ft. long; No. 2, 150 ft. long; No. 3, 75 ft. long; No. 4, 60 ft. long. Total development approximately 1200 ft. **Plant:** 50-ton steam driven concentrator, built in 1921. **Ore:** Lead-silver. **Men employed:** Average, 7. **Remarks:** Company was active throughout the year and shipped a small amount of ore.

IMA CONSOLIDATED MINING & MILLING CO.

Office: 611 Deseret Bank Bldg., Salt Lake City, Utah. **Officers:** Oscar W. Moyle, Pres.; Ezra T. Stevenson, Sec., both of Salt Lake City, Utah. **Inc.:** Dec. 16, 1902. **Capital:** 2,000,000 shares; par value 1c; all shares issued. **Remarks:** Property under lease to Blue Wing Tungsten Mining & Milling Co.

JUNCTION MINES CO.

Office: Salmon. **Officers:** C. G. Mathewson, Pres.; John H. Padgham, Sec., both of Salmon. **Inc.:** Aug. 8, 1905. **Capital:** 250,000 shares; par value \$1; 150,000 shares issued. **Remarks:** Company owns no mining property in Idaho, having sold all of their interest to the Sunset Mining Co.

KIMMEL MINING CO.

Office: Pocatello. **Officers:** C. W. Gray, Pres., Pocatello; F. O. McFall, Sec.-Mgr., 37 E. Broadway, Salt Lake City, Utah. **Inc.:** Jan. 12, 1920, charter forfeited Dec. 1, 1922. **Capital:** 1,500,000 shares; par value 20c.; 800,000 shares issued. **Property:** Kimmel group; 6 unpatented claims, Junction dist.; Leadore. **Development:** Approximately 3000 ft. of underground workings. **Ore:** Lead-silver. **Men employed:** Average, 3. **Remarks:** Secretary's report states that Kimmel Mining Co. was consolidated with the Leadore Consolidated Mines Co. The latter company is not authorized to do business in Idaho.

LATEST OUT MINING & SMELTING CO., LTD.

Office: Gilmore. **Officers:** Ralph Nichols, Pres.; D. L. Nichols, Sec.-Mgr., both Gilmore. **Capital:** 500,000 shares; par value \$1; all shares issued. **Property:** Latest Out; 1 patented claim, Texas dist.; Gilmore. **Development:** One tunnel, 365 ft. long; 2 inclined shafts, totaling 1100 ft., giving a vertical depth on the vein of 700 ft. Total development approximately 28,000 ft. **Plant:** F-M, 40 h. p. gas driven hoist; 145 cu. ft. I-R gas driven compressor; gravity tram; complete mining equipment and camp. **Ore:** Lead-silver. **Men employed:** Average, 20. **Remarks:** One of the largest mines of Lemhi County, and a consistent lead producer. Capacity production was maintained throughout the year.

LEESBURG GOLD DUST MINING CO.

Officers: D. H. Winger, Pres.; W. S. Burton, Sec., both of Salt Lake City, Utah. **Inc.:** April 14, 1911. **Capital:** 1,500,000 shares; par value \$1; 1,200,000 shares issued. **Property:** 8 patented, 4 unpatented claims, Mackinaw dist.; Leesburg. **Development:** Approximately 4000 ft. of underground workings. **Ore:** Gold. **Plant:** An old 10-stamp mill. **Remarks:** Idle.

LEMHI MINING CO.

Officers: Dr. W. Randall, Pres.; Loxley, Alabama; A. L. Nichols, Sec., Winchester, Ind.; R. E. Lee Ramey, Mgr., Salmon. **Inc.:** Nature of organization unknown. Has never complied with the corporate laws of Idaho. **Capital:** 5000 shares; no par value; 4,918 shares issued. **Property:** Rabbit Foot group; 15 unpatented claims, Gravel Range dist.; Forney. **Development:** Approximately 7000 ft. of underground workings. **Plant:** MINE: 140 h. p. steam driven hoist. MILL: An old steam driven 10-stamp mill.

LEMHI-UNION CO.

Office: St. Anthony. **Officers:** Geo. B. Rumsey, Pres.-Mgr.; Otis M. Van Tassel, Sec., both of St. Anthony. **Inc.:** Dec. 20, 1913. **Capital:** 503,156 shares; par value \$1; all shares issued. **Property:** Lemhi-Union group; 19 unpatented claims, Spring Mountain dist.; Gilmore. **Development:** Principally by one tunnel, 1450 ft. long. **Ore:** Lead-silver. **Men employed:** Average, 3. **Remarks:** Active development work progressed throughout the year, money being raised through stock assessments: 311,047 shares returned to treasury through delinquent sales.

MONTANA MINING & LIVE STOCK CO.

Office: Leesburg. **Officers:** C. A. Devlan, Pres.-Mgr.; E. H. Devlan, Sec.; both Leesburg. **Inc.:** March 8, 1919. **Capital:** 5,000,000 shares; par value 10c; 2,000,000 shares issued. **Property:** Leesburg group; 10 unpatented placer claims, Mackinaw dist.; Leesburg. **Plant:** Steam driven hoist and 100 cu. ft. I-R compressor; complete mining and logging equipment; saw mill; complete camp and buildings. **Ore:** Placer gold.

NEW DEPARTURE COPPER MINING CO.

Office: Leadore. **Officers:** Chas. F. Lloyd, Pres.-Mgr., Leadore; Frank H. Dunbar, Sec., Dillon, Mont. **Inc.:** July 1, 1919. **Capital:** 50,000 shares; par value \$1; 40,000 shares issued. **Property:** 5 unpatented claims, two of which are held under lease and bond from Thos. Keating; Junction dist.: Leadore.

NORTHWESTERN DEVELOPMENT CO., LTD.

Office: Ashland Ky. **Officers:** C. E. Williams, Pres.; Thos. Boggess, Sec., both Ashland, Ky. **Inc.:** Aug. 28, 1916. **Capital:** 500,000 shares; par value \$1; 234,990 shares issued. **Property:** Primrose group; 6 patented claims, Eldorado dist.; Salmon.

PINE CREEK MINING CO.

Office: Spokane, Wash. **Officers:** H. O. Wadewitz, Pres.; H. Goldsworthy, Sec., both of Racine, Wis. **Inc.:** Jan. 2, 1914. **Capital:** 500,000 shares; par value \$1; 475,000 shares issued. **Property:** Pine Creek group; 7 unpatented claims, Mineral Hill dist.; Shoup.

PITTSBURGH-IDAHO CO., LTD.

Office: 933 Liberty Ave., Pittsburgh, Pa. **Officers:** G. W. Provost, Pres.-Mgr.; J. S. Thornton, Sec., both of Pittsburgh, Pa. **Capital:** 1,000,000 shares common, 250,000 shares preferred, par value \$1; 853,360 shares common, 89,683 shares preferred, issued. **Property:** Pittsburgh-Idaho group; 5 patented, 10 unpatented claims, Texas dist.; Gilmore. **Development:** By 4 tunnels and 1 inclined shaft 1025 ft. long, giving a vertical depth of 800 ft. Total development over 20,000 ft. **Plant:** MINE: 100 h. p. electrically driven hoist; one I-R 250 cu. ft. and one C-P 300 cu. ft. electrically driven compressors; one 160 h. p. Allis-Chalmers, Diesel gas engine driving electric

generator; complete mining equipment, camp and buildings. **MILL:** 50-ton concentrator, gas driven. **Ore:** Lead-silver. **Men employed:** Average, 40. **Remarks:** One of the largest producers of lead ore in Lemhi County. Capacity production maintained throughout the year.

POPE-SHENON MINING CO.

Office: 406 Vermont Bldg., Salt Lake City, Utah. **Officers:** R. H. Winder, Pres.; George A. Smith, Sec.-Mgr., both of Salt Lake City, Utah. **Inc.:** Dec. 3, 1917. **Capital:** 1,000,000 shares; par value 20c.; 717,913 shares issued. **Property:** Pope-Shenon group; 12 unpatented claims, Eureka dist.; Salmon. **Development:** 5 tunnels: No. 1, 120 ft. long; No. 2, 125 ft. long; No. 3, 390 ft. long; No. 4, 100 ft. long; No. 5, 840 ft. long. Total development approximately 1800 ft. of underground workings. **Plant:** MINE: 12x10 I-R electrically driven compressor; Sullivan steel sharpener; complete mining equipment and camp. **MILL:** 50-ton concentrator. **Ore:** Copper. **Men employed:** Average, 20. **Remarks:** Early in the year George A. and William M. Snow acquired a working lease on this property, taking possession about the first of August, after which the chloridizing plant was converted into a concentrator. A large tonnage of ore has been blocked out, and continuous production by the leasers has been maintained since the plant was changed.

PORTLAND MINING CO.

Office: Leonard Hotel, Butte, Mont. **Officers:** E. J. Carleton, Pres., N. Y. Life Bldg., Minneapolis, Minn.; W. S. Shaw, Sec., Butte, Mont. **Inc.:** Aug. 11, 1920. **Capital:** 500,000 shares; par value \$1; all shares issued. **Property:** Portland group; 11 unpatented claims, Texas dist.; Gilmore.

REPUBLIC CONSOLIDATED MINING & REFINING CO.

Office: Patterson. **Officers:** W. P. Barton, Pres.-Mgr., Patterson; Dr. B. Goldfield, Sec., 921 S. Ashland Blvd., Chicago, Ill. **Inc.:** Aug. 9, 1922. **Capital:** 3,000,000 shares; par value \$1; 1,878,400 shares issued. **Remarks:** This company has taken over the Blue Wing Tungsten Mining & Milling Co. which exchanged its entire capital stock for stock in this company. The officers of the new company state that plans have been completed for the erection of a large milling plant.

SILVER CONSOLIDATED MINING CO.

Office: St. Anthony. **Officers:** John Donaldson, Pres., Teton; John Williams, Sec., Sugar City; Wood D. Parker, Mgr., St. Anthony. **Inc.:** March 12, 1917. **Capital:** 1,000,000 shares; par value 10c.; 832,000 shares issued. **Property:** 18 unpatented claims, Spring Mountain dist.; Gilmore. **Development:** By one principal tunnel which is 1400 ft. long. **Plant:** Gas driven compressor; complete mining equipment. **Ore:** Lead-silver. **Remarks:** Small amount of development work done during the year.

SILVER DOLLAR MINING CO., LTD.

Office: Salmon. **Officers:** John Ostrander, Vice Pres.-Mgr., Gibbonsville; E. H. Casterline, Sec., Salmon. **Inc.:** Jan. 10, 1918. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** 17 unpatented claims, Dahlonga dist.; Gibbonsville. **Development:** Approximately 2800 ft. of underground workings. **Ore:** Gold. **Men employed:** Average, 2.

UTANA MINING CORPORATION

Office: 201 Felt Bldg., Salt Lake City, Utah. **Officers:** W. H. Penner, Pres.; Web. Greene, Sec., both of 201 Felt Bldg., Salt Lake City, Utah. **Inc.:** Aug. 4, 1921. **Capital:** 1,000,000 shares; par value 10c.; 160,000 shares issued.

Property: Gold Dyke group; 22 unpatented claims, Freeman dist.; Salmon.
Development: Approximately 1600 ft. of underground workings. **Plant:** Steam driven compressor; complete mining equipment and camp; complete unassembled machinery and equipment for a cyanide plant. **Ore:** Lead-silver.
Men employed: Average, 5. **Remarks:** Assessment work only throughout the year. Company endeavoring to refinance property and correct mistakes of its predecessor.

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Alex Stevens	Texas	Wm. Howard	Gilmore
Anaconda Gr.	Eldorado	John H. Adams	Salmon
Andy Lee	Gravel Range	F. M. Pollard	Los Angeles, Cal.
Arnett Creek Pl.	Mackinaw	Busch & Stuckey	Leesburg
Baby Joe Gr.	Junction	W. F. Stone	Leadore
Belcher	Gibbonsville	Chas. Goff	North Fork
Big 8-Mile	Junction	J. D. Pritchett	Leadore
Blue Bird	McDevitt	E. G. Lynch	Digby, N. S.
Boulder Gulch	Mineral Hill	John Brittain	Salmon
Brown Bull	Texas	E. C. Ross	Gilmore
Bryn Mawr et al.	Indian Creek	Davis Davies	North Fork
Buck-a-roo	Silverton	W. J. Shoup	Salmon
Cabin	Unorganized	Frank G. Worthing	Reno, Idaho
Carrie Cody	Texas	H. S. Knight	222 Kearns Bldg., Salt Lake City, U
Castle Rock	Blue Wing	C. B. Graves	Patterson
Clara Morris Gr.	Gibbonsville	H. B. Hankey	Salmon
Clipper Bullion	Mineral Hill	E. S. Suydam	North Fork
Copper Gliance	Blackbird	Chas. Anderson	Leesburg
Copper King	Hayden Creek	Earl R. Galbraith	Salmon
Daly Creek	Mackinaw	John M. Smith	Salmon
.....	Indian Creek	W. W. Smith	Ulysses
Democrat	Texas	Thos. Grooms	Gilmore
Diamond Gr.	Blackbird	Wm. Swan	Salmon
Diamond Gulch	Eureka	Geo. Matics	Salmon
Dig More No. 1	Junction	Rouche & Pottle	Leadore
Dreamer Gr.	Junction	Dr. I. B. Keller	Leadore
Dunton Placer	Gibbonsville	Fred Dunton	Gibbonsville
Eagle Mine	Gibbonsville	Alfred Anderson	Gibbonsville
Forney Gr.	Gravel Range	R. E. Lee Ramey	Forney
Golden Rule	Eureka	W. B. Horn	Salmon
Gold Point	Eldorado	Dave Stilles	Salmon
Gold Star	Mackinaw	J. A. Fry	Leesburg
Gold Stone Gr.	Pratt Creek	Mrs. Isadore Gies	Great Falls, Mont.
Governor	Gibbonsville	E. C. Nohle	Gibbonsville
Grace	Mackinaw	Thos. Pope	Salmon
Greenhorn Mines	Eureka	F. S. Wright	Salmon
Grizzly Hill	Junction	W. F. Stone	Leadore
Grunter Gr.	Mineral Hill	N. R. Waterman	187 R St., Salt Lake City, Utah
Hard Carbonate	Spring Mountain	P. H. Clarke	Gilmore
Hawkeye Gr.	Blackbird	Smith & Weidiner	Leesburg
High Ore	Spring Mountain	J. W. Spiers	Gilmore
Hockensmith	Mackinaw	Chas. Goff	Leesburg
Hughes Creek Pl.	Gibbonsville	Justin Finch	Helena, Mont.
Iron Mask	Spring Mountain	F. L. Clark	Gilmore

MINING INDUSTRY OF IDAHO

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Italian	Mackinaw	J. A. Herndon	Salmon
King Solomon	Eureka	Pabst Bros.	Salmon
Last Chance	Mackinaw	Grant Rood	Leesburg
Last Chance	Gibbonsville	Henry Schreiber	Gibbonsville
Liberty Bond Gr.	McDevitt	R. F. Morphey	Leadore
Lloyd Gr.	Junction	Chas. F. Lloyd	Dillon, Mont.
Lone Star	Eureka	Geo. Matics	Salmon
Lone Star	Pratt Creek	Mrs. Jennie Turnblade	Salmon
McCarty et al.	Gibbonsville	Percy Anderson	Salmon
McKinley Gr.	Eureka	Geo. Coronkrite	Salmon
Mahogany	Mineral Hill	A. C. Amonson	Salmon
Maine Silver Moon	Texas	J. A. Nash	Gilmore
Mayflower	Mackinaw	Earl R. Galbraith	Salmon
Miser's Dream	Mineral Hill	R. A. Joseph	Gilmore
Moonshine	Silverton	W. W. St. Clair	Salmon
Moose Creek	Eureka	John E. Mullen	Salmon
Dredge			
Mountain Boy	Texas	Hugh Ferguson	512 W. Pearl St., Butler, Pa.
Murphy Gr.	Texas	Joe Denton	Gilmore
Musgrove Mine	Blackbird	Arthur Green	Salmon
Patton Gr.	Junction	A. J. Smith, Mgr.	Leadore
Pope Gr.	Mackinaw	Thos. Pope	Salmon
.....	Spring Mountain	Oakley & Ellis	Dubois
Queen of the Hills	Eureka	Emerson Hill	Salmon
Ranger	Eldorado	Camele Rock	Salmon
Rattler	Kirtley Creek	Homer Harris	Salmon
Red Cross Gr.	Unorganized	J. T. Pugh	Salmon
Red Gravel	Mackinaw	Bu Kee & Ah Moon	Leesburg
Richardson Placers	Mackinaw	Will Shoup	Salmon
Ring Bone Cayuse	Mackinaw	Fred Brough	Salmon
Road Agent	Junction	Dick Roach	Leadore
Robinson Lode	Blackbird	Chas. S. Miller	Leesburg
Rosebud	Texas	Rock Vezina	Leadore
Rose & Bohannon	Blackbird	A. C. Ludwig	Salmon
Roxie	Silverton	Lemm Cummings Sr.	Salmon
Roy	Junction	W. F. Stone	Leadore
Ruby	Eldorado	Alfred Erickson	Baker
Silver Moon	Texas	J. H. Lanyon	Gilmore
Smuggler et al.	Texas	Mac Carson	Gilmore
Speculation	Mineral Hill	Dave Sandilands	Salmon
Standard Placer	Eureka	Harry Kelly	Salmon
Sunset	Mackinaw	Crist Stuckey	Leesburg
Tempest Gr.	Spring Mountain	Joseph G. Sims	Salmon
Tendoy	Unorganized	S. A. Matthews	Salmon
Texas Gr.	Blackbird	J. O. Swift	Baker
Tormey Gr.	Unorganized	Dr. F. S. Wright	Salmon
Union	Spring Mountain	James Sims	Salmon
Vaughn Placer	Mackinaw	T. Hungate	Leesburg
Vimedii	Carmen Creek	Burt W. Simer	Salmon
Viola	Nicholia	A. F. Shear	Reno

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Virginia et al.	Pratt Creek	W. A. Byers	Baker
Walkover Placer	Hughes Creek	O. P. Kimmel	Salmon
White Horse	Spring Mountain	O. M. Perkins	Gilmore
Wickham & Bleness	Eureka	R. E. Wickham	Salmon
Yellow Jacket Pl.	Yellow Jacket	J. M. Burkhart, Jr.	Salmon

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LEWIS COUNTY

In the past a small amount of prospecting has been done in the vicinity of Craig Mountain. Veins carrying copper, gold, and silver have been developed, and one company built a small mill. No activities were reported during 1922. In addition to the metals mentioned, marble is the only other mineral that has received much attention.

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NEZ PERCE COUNTY

The large deposits of limestone suitable for Portland cement constitute one of the principal potential mineral resources of Nez Perce County. These deposits have received a small amount of attention, but during 1922 nothing was done toward their development.

Copper, gold and silver are found in a few isolated sections of the county, as well as black marble, which will take a good finish. Other than assessment work nothing of importance transpired during the year.

TAMMANY OIL CO.

Office: 302 Main St., Lewiston. **Officers:** V. F. Lorang, Pres.-Mgr.; F. S. Rice, Sec., both of Lewiston. **Inc.:** Jan. 24, 1921. **Capital:** 1,000,000 shares; par value \$1; 105,849 shares issued. **Property:** Oil, gas, coal, and mineral rights on over 15,000 acres in Tammany Valley, Myrtle section; White Bird; held under lease. **Development:** Well 150 ft. deep.

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Gold Standard	Cave Gulch	G. C. Ettershank	Lewiston
Homestead Entry	Clearwater	G. H. Gibbs	R. F. D. No. 2, Juliaetta
Iron Cap	Peck	W. H. Rugg	Peck
Montana	Unorganized	Frank Cole	Lewiston

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OWYHEE COUNTY

The large placer deposits discovered in 1863 first attracted attention to this county. A stampede followed; in a short time the Silver City district was thickly settled; and the discovery of the quartz veins resulted shortly afterward. The placer deposits were soon exhausted and the rich quartz veins then received attention. The ore found was the richest gold-silver ore ever discovered in the State, and many tons of it that had a phenomenal value were shipped. These mines were the first deep mines to be operated in the State, and for many years Owyhee County was a great producer of gold and silver. Early day records are such that the statistics on production are not very reliable, but from the best sources available an estimated production of over \$40,000,000 is conservative.

During late years, on account of adverse gold mining conditions, this county has been very inactive, although 1922 witnessed a small increase over the previous year. The principal operators were: the leasers at the Alpine and Trade Dollar; the Never Sweat, Great Western, Red Jacket and Demming companies; and the Flint, Ruth, and Pauper mines. The most important results from these developments were the discoveries at the Never Sweat and the Ruth. These appear to be substantial and are having their influence in attracting attention to the Silver City district.

All of the high grade ore in the mines of this county has not been exhausted, nor have all of the veins been discovered. To those looking for opportunities along these lines this county is worthy of investigation.

BANNER MINING & MILLING CO.

Office: 1122 State St., Boise. **Officers:** Peter Steele, Pres.-Mgr., Silver City; F. S. Heer, Sec., Boise. **Inc.:** Jan. 15, 1905. **Capital:** 1,500,000 shares; par value \$1; 1,142,086 shares issued. **Property:** Banner group; 7 patented, 13 unpatented claims, Carson dist.; Silver City. **Development:** Principally by 5 tunnels: No. 1, 200 ft. long; No. 2, 900 ft. long; No. 3, 1200 ft. long; No. 4, 1500 ft. long; No. 5, 500 ft. long. Total development approximately 12,000 ft. **Plant:** MINE: 12x12 electrically driven compressor; complete mining equipment and camp. **MILL:** 30-ton stamp mill, including concentration. **Ore:** Gold-silver. **Men employed:** Average, 8.

BOULDER CREEK MINING CO.

Officers: E. Arthur Miller, Pres., 915 Lincoln Ave., Decatur, Ill.; Addie Krieg, Sec., Silver City. **Inc.:** May 27, 1915. **Capital:** 500,000 shares; par value 1c.; 300,539 shares issued. **Property:** 8 unpatented claims, Steele dist.; Silver City. **Remarks:** Assessment work only.

CASTLE CREEK MINING & MILLING CO.

Office: Nampa. **Officers:** F. B. Smith, Pres.; A. E. Reinhardt, Sec., both of Nampa; E. F. Dunham, Mgr., Oreana. **Inc.:** An association. **Capital:** 500,000 shares; par value \$1; 401,500 shares issued. **Property:** Blue Bird group; 5 unpatented claims in Pixley Basin, unorganized dist.; Grandview. **Development:** 3 tunnels: No. 1, 150 ft. long; No. 2, 350 ft. long; No. 3, 800 ft. long; and one inclined shaft, 210 ft. in length giving a vertical depth of 200 ft. **Plant:** 10x10 gas driven compressor; complete mining equipment and camp. **Ore:** Silver. **Men employed:** Average, 2.

CASTLE CREEK OIL & REFINING CO.

Office: Nampa. **Officers:** E. W. Rowland, Pres.-Mgr.; G. W. Mills, Sec., both of Nampa. **Inc.:** Sept. 2, 1920. **Capital:** 3,000,00 shares; par value 10c.: 1,257,600 shares issued. **Property:** Government oil and gas prospecting permit on 2,560 acres and gas and oil lease on 360 acres of patented land. **Development:** 6 inch well, 180 feet deep. **Mineral sought:** Gas and oil.

DEMMING MINES CO.

Office: Nampa. **Officers:** C. T. Payton, Pres.; W. L. DeRemer, Sec.; A. S. Wright, Mgr., all of Chicago, Ill. **Inc.:** Dec. 15, 1916. **Capital:** 3,000,000 shares; par value \$5; all shares issued. **Property:** Demming mine; 38 unpatented claims, Steele dist.; Triangle. **Development:** Principally by 3 tunnels; No. 1, 3500 ft. long; No. 2, 1500 ft. long; No. 3, 1000 ft. long. **Plant:** MINE: One electrically driven and one air driven hoist; 750 cu. ft. I-R electrically driven compressor; complete mining equipment; hotel, bunk house, assay office and numerous other buildings. MILL: 100-ton flotation concentrator. **Ore:** Gold, silver.

FLINT MINE

Owner: R. C. Dugdale, Silver City. **Property:** Flint group; 4 patented, 16 unpatented claims, Flint dist.; Silver City. **Development:** Principally by one tunnel, which is over 2000 ft. long and exposes the vein over 500 ft. in vertical depth. Total development approximately 10,000 ft. **Ore:** Silver-gold. **Men employed:** Average, 12. **Remarks:** Active development work progressed throughout the year. During the closing months construction work was started on a power line to the mine. Construction work also started on a stamp mill which will include fine grinding cyanide and concentration. The owner expects to have the mill, as well as compressor, hoist, and complete mining equipment installed and in operation by the first of April. He reports a large tonnage of ore amenable to treatment blocked out. This mine was one of the most active in Owyhee County throughout the year.

GOLCONDA GROUP MINING CO.

Office: N. 610 Washington St., Spokane, Wash. **Officers:** G. A. Sonneman, Pres.-Mgr.; E. W. Sonneman, Sec., both of Spokane, Wash. **Inc.:** Jan. 11, 1908. **Capital:** 1,500,000 shares; par value 1c.; all shares issued. **Property:** South Mountain group; 15 patented claims, South Mountain dist.; Jordan Valley, Ore. **Remarks:** Idle for many years.

GOLD CRATER MINES CO.

Office: Boise. **Officers:** Wm. Williams, Pres., Silver City; Wm. Healey, Sec., Boise. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** Rich Gulch group; 11 patented, 1 unpatented claim, Carson dist.; Silver City.

GREAT WESTERN MINES CO.

Office: Room 169, Republican House, Milwaukee, Wis. **Officers:** S. S. Houle, Pres.; F. H. Mayhew, Sec., both of Milwaukee, Wis.; T. W. Galigher, Agent, Boise. **Inc.:** Nov. 29, 1920, charter forfeited Dec. 1, 1921. **Capital:** 1,500,000 shares; par value 1c.; 975,553 shares issued. **Property:** Chapman group, owned by Chapman & Emerson, Boise; 3 unpatented claims, held under lease and bond. Company owns 2 unpatented claims; French dist.; Silver City. **Development:** By 2 tunnels: No. 1, 1,100 ft. long; No. 2, 500 ft. long. Total development approximately 1900 feet. **Plant:** Electrically driven 10x10 compressor; complete mining equipment and camp. **Ore:** Gold. **Men employed:** Average, 3. **Remarks:** Active operations were maintained throughout the year.

NEVER SWEAT MINING CO.

Office: Nampa. **Officers:** Geo. O. A. Kellogg, Pres.; D. L. Rhodes, Sec., both of Nampa; E. P. Kellogg, Mgr., Silver City. **Inc.:** July 6, 1922. **Capital:** 200,000 shares; par value \$10; all shares issued. **Property:** Never Sweat group, owned by Louis Sorenson, held under lease and bond; 4 unpatented claims, Carson dist.; Silver City. **Development:** Principally by one tunnel 1100 ft. long. Total development approximately 1700 ft. **Ore:** Gold-silver. **Men employed:** Average, 10. **Remarks:** Complete camp and mine buildings constructed and active development work maintained during the year and a very creditable showing of high grade ore developed.

RED JACKET GOLD MINING CO.

Office: 402 Idaho Bldg., Boise. **Officers:** Geo. Wagner, Pres.; Dr. A. L. Heine, Sec.-Mgr., both of Boise. **Inc.:** July 14, 1921. **Capital:** 1,000,000 shares; par value 25c.; 667,440 shares issued. **Property:** Dernier Resort group; held under lease and bond from Lafe Boone, Boise; 5 unpatented claims, French dist.; Silver City. **Development:** By 5 tunnels; No. 1, 640 ft. long; No. 2, 275 ft. long; No. 3, 800 ft. long; No. 4, 250 ft. long; No. 5, 400 ft. long. Total development approximately 2400 ft. **Plant:** Electrically driven I-R duplex compressor; complete mining equipment. **Ore:** Gold. **Men employed:** Average, 6. **Remarks:** Active development campaign was maintained throughout the year.

STORMY HILL MINING CO.

Officers: M. A. Carton, Pres., Utica, N. Y. **Inc.:** Oct. 21, 1905, charter forfeited Dec. 1, 1912. **Property:** Stormy Hill group; 5 unpatented claims, Carson dist.; Silver City.

TALMAGE RAWHIDE MINES CO.

Office: Nampa. **Officers:** Melvin T. Rowland, Pres., Nampa; Walter J. Long, Sec.-Mgr., Detroit, Mich. **Inc.:** July 7, 1921. **Capital:** 3,000,000 shares; par value \$1; 1,500,000 shares issued. **Property:** 20 unpatented claims, Steele dist.; Murphy.

TEXAS BASIN COAL MINE

Owner: D. D. Joslin, Jordan Valley, Ore. **Property:** U. S. government coal prospecting permit; Carson dist.; Jordan Valley, Ore.; R. R., Pickle Butte, 25 miles. **Development:** One short tunnel and numerous open cuts. **Mineral sought:** Coal. **Remarks:** During the closing months of the year an active development campaign was started.

WAR EAGLE CONSOLIDATED MINING CO.

Office: 919 Real Estate Trust Bldg., Philadelphia, Pa. **Officers:** Frank S. Lewis, Pres.; J. S. Freemann, Sec., both of Philadelphia, Pa. **Inc.:** April 32, 1907, charter forfeited Dec. 1, 1912. **Capital:** 60,000 shares preferred; par value \$50; all shares issued. **Property:** War Eagle group; 8 patented claims, French dist.; Silver City. **Remarks:** This company owns the Sinker tunnel.

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Addie Group	French	F. M. Orem	Salt Lake City, U.
Afterthought et al.	French	Ernest V. Orford	Boise
Amida	Flint	John W. Shore	De Lamar
Burns et al.	Carson	C. M. Caldwell	Silver City
Daly Group	Carson	J. W. Daley	Silver City
De Lamar	Carson	H. H. Bonnell	De Lamar
Henrietta	Carson	C. L. Norcross	168 Dartmouth St. Boston, Mass.
High Ore	French	P. C. Conway	Silver City
Homestake	French	George Schlack	Silver City
Homestake Placer	Snake River	Chas. Brown	Murphy
May Queen	Carson	Chas. O. Hartley	Emmett
Meadow Lark	Carson	Willenegger Bros.	De Lamar
Never Sweat	French	Louis Sorensen	Silver City
Ontario	Carson	Mrs. J. Mattenson	Boise
Pauper	Carson	R. H. Leonard	Silver City
Poorman	French	Fred Grete	Silver City
Potosi	Carson	Jack Stoddard	Silver City
Rich Gulch	Carson	Sam Williams	Tulsa, Okla.
Ruth	French	Geo. Westlake	Hailey
Sugar Loaf	French	A. P. Nugent	Silver City
Sunnyside	Carson	G. A. Bergh	1228 State St., Boise
Teddy	Steele	B. H. Hyde	Oreana
Triangle et al.	Steele	Dave H. Johnson	Oreana
Village Blacksmith	Carson	Duncan & Lackey	Silver City
Wannensten Group	Carson	Andrew Wannesten	Nampa
War Eagle Group	French	Wm. Healy	Boise

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PAYETTE COUNTY

At a depth of 1100 feet the Idaho Oil & Gas Co. encountered a flow of gas, the quantity of which has not been determined; but the pressure was sufficient to indicate that it may be of commercial importance. Diatomaceous earth and excellent clay deposits are also found in this county.

The gas encountered by the Idaho Oil & Gas Co. had a stimulating effect on oil and gas promotions and considerable attention was given to the Willow Creek section.

IDAHO OIL & GAS CO.

Office: Nampa. **Officers:** John P. Congdon, Pres., Boise; W. C. Dewey, Sec., Nampa. **Inc.:** Mar. 25, 1920. **Capital:** 10,000,000 shares; par value 10c.; 7,155,037 shares issued. **Property:** Oil and gas leases on approximately 33,000 acres of patented farm land. **Development:** 1100 ft. well. **Plant:** Complete well drilling equipment. **Mineral sought:** Oil and gas. **Remarks:** Idle throughout the year.

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POWER COUNTY

Gold recovered from the gravel bars along the Snake River constitutes the only mineral resource of this county. The operation of these placers generally returns a fair profit on the labor, and a small number of them were active during the year.

IDAHO RESEARCH & DEVELOPMENT CO.

Office: Hub Bldg., Pocatello. **Officers:** George Williams, Pres.; George Stoll, Sec.-Mgr., both of Pocatello. **Inc.:** Aug. 2, 1920. **Capital:** 40,000 shares; par value \$25; 23,765 issued. **Property:** Oil leases on 23,000 acres of patented farm land. **Development:** 12 inch hole, 400 ft. deep. **Plant:** 15 h. p. steam driven well drilling machinery and equipment. **Mineral sought:** Oil and gas. **Remarks:** Idle throughout the year.

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Daylight Pl.	Snake River	Jas. J. Sorensen	Neeley
Diamond et al. Pl.	Snake River	Wm. M. Main	Aberdeen
Golden Clift Pl.	Snake River	Geo. J. Wheeler	American Falls
..... Pl.	Snake River	L. N. Rosencrans	American Falls

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SHOSHONE COUNTY

In area Shoshone County is one of the largest counties in the State, covering approximately 2600 square miles. The entire county is mountainous, containing but a limited area of agricultural land, and is entirely dependent upon the mining and timber industries. These two industries are of such magnitude and importance that this county is one of the wealthiest in the State. Lying approximately in the geographical center of the county is the famous Coeur d'Alene district, a district with undefined boundaries, but containing an area of approximately 400 square miles and known throughout the world as one of the largest lead-silver producing regions in the United States. For many years this district has yielded approximately 90 per cent of the lead and 85 per cent of the silver mined in Idaho. In addition to lead, silver and zinc Shoshone County produces a considerable amount of copper and in the past has produced antimony and tungsten. These metals and gold (both placer and lode) constitute the principal mineral resources. The year 1922 witnessed a great revival of mining, as all of the large mines as well as many small development companies that were idle throughout 1921 resumed operations. Many new companies were organized and commenced operations, prospecting increased, and a general spirit of optimism was manifested throughout the year.

The principal factors contributing to the marked increase in mining and resumption of operation by the large mines which were closed down were the repeal of the excess profit tax; reduction in freight rates; the increase in metal prices, particularly lead and zinc; and the increase in wages paid throughout the district.

The principal new discoveries and new developments that promise to give this county additional mines of importance and which have had a stimulating effect on development and prospecting are the following:

During the year the Western Union Mining Co. took control of its mine which had been opened by leasers, many of whom made small fortunes during the past few years. The company at once commenced an active development campaign which disclosed a large amount of ore. This ore has been proven to extend in depth and the present condition of the mine indicates that it is permanent; and there seems to be no question that this property will soon become one of the principal mines of the Coeur d'Alene district.

The property which has been developed by the Galena Mining Co. for the past two years responded in excellent shape to the extensive development campaign that was undertaken. The extent of the ore bodies was further demonstrated and a tonnage of ore, sufficient in quantity to assure the district and the county a new dividend payer, has been blocked out. This company was consolidated with the Callahan Zinc-Lead Co., and with this strong financial interest back of it there is no question about the future life of the property.

The prospecting work of the Lookout Mountain Mining Co. further proved the extent of the ore bodies as well as demonstrating the fact that deeper development is warranted. Plans for driving a lower tunnel were completed, the outcome of which in all probability will add another new and important mine to this county.

One of the most important discoveries was that of the new ore body in the Success mine. This new shoot was sufficiently explored to prove that it is of considerable magnitude and this mine experienced a phenomenal revival.

The property of the Big Creek Mining Co., Ltd., was taken over by the Bunker Hill & Sullivan Mining & Concentrating Co., which immediately commenced an extensive development campaign which resulted in some very important disclosures. The fact that this strong company has taken control indicates that the property has merit and will in all probability soon be classed as one of the important mines of the district.

The ore bodies on the lower level of the Hecla have been proven to be larger and more extensive than in any other part of the mine and the new discoveries made by this company on the Wide West claim, which was recently acquired from the Federal Mining & Smelting Co., were of sufficient importance to indicate that the resources of this company have been greatly augmented.

The developments of the Sunshine Mining Co. proved this property to be substantial. Production was greatly increased and it is becoming recognized as one of the new mines.

The ore bodies in the Star mine have been sufficiently proven to satisfy the present owner, the Sullivan Mining Co., that they constitute a mine of importance. However, production from this property must wait until the famous Star crosscut is completed, which should be during 1923.

The development work that progressed throughout the year at the property of the Independence Lead Mines, Ltd., further proved the extent of the ore bodies.

The disclosures made and the development work done by the Cedar Creek Mining & Development Co., Ltd., proved a large tonnage of sufficient extent to justify the statement that this was one of the principal new mines to "come in" during the year, and that it lacks only a mill to become a producer. This property is located in the territory commonly referred to as the "North Side" and is of considerable importance as it proves the worthiness of that section.

A discovery of considerable importance and one which will probably give the Coeur d'Alene district a new producer early in 1923 was that of the leasers at the old Argentine mine. A large tonnage of ore has been proven; extensive development is under way; equipment was being added during the closing months of the year to expedite the handling of the ore; and plans for milling the ore at one of the mills in the district were completed.

The commercial ore found at a depth of 1800 ft. in the long crosscut tunnel of the Montana-Idaho Copper Co. in the St. Regis district is holding up under exploration and appears to be substantial and lacks only further prospecting to determine its extent.

The most important installations and new plants constructed in the Coeur d'Alene district were those of the Bunker Hill & Sullivan Mining & Concentrating Co. consisting of the completion of the company's new South Mill which greatly adds to the concentrating capacity, a new auxiliary power plant, a new electric hoist for the White Raise, and a new sampling mill at the smelter.

The Federal Mining & Smelting Co. rehabilitated its hydroelectric power plants which had been idle for a number of years and commenced rebuilding its Morning mill. The improvements being added to the Morning mill constitute radical changes in present ore-dressing methods and will represent one of the most advanced steps that has been taken in many years.

The Hecla Mining Co. reconstructed and greatly enlarged its surface mining plant.

The equipment in the mill of the National Mining Co. was rearranged and sufficiently modified to permit treatment of the tailings from the Gold Hunter Mining & Smelting Co.

The Paragon Mining Co. rebuilt its mill, changed the flow sheet and added a flotation unit.

The research work in electrolytic smelting of lead and zinc ore conducted by the Bunker Hill & Sullivan Mining & Concentrating Co. during the year terminated in gratifying results. The company's 10-ton pilot plant proved that the methods employed were successful, and the construction of a 30-ton plant for the treatment of lead-silver ore on a commercial basis was started. This plant should be completed and in operation in the early part of 1923. The outcome of the operations of this new method is looked forward to with expectancy, as it will probably prove to be of invaluable assistance to the state and the mineral producers in general, as it is such a marked advance in the metallurgical treatment of base ores that its successful outcome may be revolutionary.

The extensive development work done by practically all of the large operators in the lower levels of their mines during the year proved their ore bodies to be more extensive and of higher grade than in the upper levels. The many properties that have the indication of becoming large mines; the many prospects that are being developed, and the other properties that are worthy of development, together with the large operating mines assure Shoshone County a permanent mining industry for many years.

AETNA MINING & MILLING CO., LTD.

Office: Wallace. **Officers:** J. J. Murphy, Pres.-Mgr., Burke; O. W. Lewis, Sec., Wallace. **Inc.:** March 9, 1915. **Capital:** 1,500,000 shares; par value 10c; 869,275 shares issued. **Property:** 4 unpatented claims, Lelande dist.; Burke. **Remarks:** Assessment work only. One mill assessment levied May 6, 1922.

AJAX MINING CO.

Office: Burke, P. O. Box 33. **Officers:** F. Moriarity, Pres., E. 914 Nora Ave., Spokane, Wash.; J. A. Havighorst, Sec., 714 W. 14th Ave., Spokane, Wash.; Alva C. Bixby, Mgr., Burke. **Inc.:** Oct. 20, 1902. **Capital:** 1,600,000 shares; par value \$1; all shares issued. **Property:** 13 patented, 2 unpatented claims, Lelande dist.; Burke. **Development:** 7 tunnels totaling 6600 ft. and two shafts totaling 365 ft. Total development approximately 14,500 ft. Main or No. 7 tunnel is located in Gorge Gulch a short distance above the town of Burke. This tunnel will be 5500 ft. long when completed and will develop the Moonlight property through which it passes. It is now in approximately 2500 ft. **Plant:** MINE: Type 10 I-R 550 cu. ft. electrically driven air compressor; I-R No. 50 steel sharpener; Hoar shovel. **Ore:** Lead-silver. **Men employed:** Average, 12. **Remarks:** This company was actively engaged throughout the year in extending its No. 7 tunnel. Last assessment, 1 cent levied Oct. 2, 1922.

ALHAMBRA MINING CO., LTD.

Office: 504 Empire State Bldg., Spokane, Wash. **Officers:** W. J. C. Wakefield, Vice Pres., Peyton Bldg., Spokane, Wash.; William A. Corey, Sec., Empire State Bldg., Spokane, Wash. **Inc.:** Dec. 26, 1898. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** 23 patented claims, Yreka dist.; Kellogg. **Ore:** Lead-silver. **Remarks:** Property under lease to Bunker Hill & Sullivan M. & C. Co., which was actively engaged in developing and prospecting it throughout the year.

ALICE MINING CO.

Office: Wallace. **Officers:** Walter Mackay, Pres., Portland, Ore.; James F. McCarthy, Sec.-Mgr., Wallace. **Inc.:** July 30, 1902. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** 21 patented, 2 unpatented claims, Hunter dist.; 3½ miles east of Wallace. **Development:** 10,000 ft. of underground workings. **Plant:** MINE: Compressor; hoist; complete mining equipment and camp. **MILL:** 125-ton concentrator. **Ore:** Lead-silver. **Remarks:** Idle throughout the year.

ALMA RAY MINING CO.

Office: Kellogg. **Officers:** R. A. Brockman, Pres.; C. B. Forbes, Sec., both of Kellogg. **Inc.:** April 21, 1917. **Capital:** 1,500,000 shares; par value 25c; 953,913 shares issued. **Property:** Alma Ray group; 5 unpatented claims, Yreka dist.; Kellogg. **Development:** Principally by 3 tunnels: No. 1, 65 ft. long; No. 2, 200 ft. long; No. 3, 300 ft. long; 2 short shafts. **Ore:** Lead-silver, copper. **Men employed:** Average, 1. **Remarks:** Active prospecting throughout the year. One mill assessment levied May 8, 1922.

ALPENA COPPER MINING CO.

Office: Wallace. **Officers:** C. W. Beal, Pres.; A. H. Featherstone, Sec.; J. C. Purcell, Mgr., all of Wallace. **Inc.:** Aug. 9, 1900. **Capital:** 1,000,000 shares; par value 10 cents; all shares issued. **Property:** Alpina group; 6 unpatented claims, St. Joe dist.; Delage. **Ore:** Copper. **Remarks:** About 100 ft. of tunnel driven during the year.

AMAZON-MANHATTAN MINING CO.

Office: Wallace. **Officers:** P. J. Maggy, Clerk, Wallace. **Inc.:** A partnership controlled by the Day family. **Property:** Amazon-Manhattan group; 9 patented claims, Beaver dist.; Carbonate. **Development:** Approximately 5900 ft. of underground workings. **Remarks:** Idle for a number of years.

AMERICAN COMMANDER MINING & MILLING CO., LTD.

Office: Wallace. **Officers:** Herman Marquardt, Pres.; P. Johns, Sec., both of Wallace; H. B. Kingsbury, Mgr., Mullan. **Inc.:** Oct. 24, 1901. **Capital:** 1,500,000 shares; par value \$1; shares issued, unknown. **Property:** American Commander group; 2 patented claims, Hunter dist.; Mullan. **Development:** By 3 tunnels: No. 1, 600 ft. long; No. 2, 1500 ft. long; No. 3, 2300 ft. long. **Plant:** Electrically driven 9x12 Sullivan compressor; complete mining equipment. **Ore:** Lead-silver. **Men employed:** Average, 4. **Remarks:** Active development work maintained throughout the year. One cent assessment levied Sept. 15, 1922.

AMERICAN MINING CO., LTD.

Office: Wallace, P. O. Box 236. **Officers:** William Stinson, Pres., E. 529 Boone Ave., Spokane, Wash.; John Dolan, Sec., Wallace; Tony Molitor, Mgr., Wallace. **Inc.:** Nov. 1, 1899. **Capital:** 1,000,000 shares; par value 10c; 619,675 shares issued. **Property:** 2 unpatented claims, Placer center dist.; Wallace. **Development:** 2 tunnels; No. 1. 50 ft. long; No. 2, 600 ft. long. **Ore:** Lead-silver. **Remarks:** Assessment work only for a number of years. Two mill assessment levied Oct. 3, 1922.

AMY MATCHLESS MINING & MILLING CO.

Office: Mankato, Minn. **Officers:** George Wiedenman, Pres.; C. J. Holman, Sec., both of Mankato, Minn.; Gus A. Smith, Mgr., Kellogg. **Inc.:** Nov. 24, 1913. **Capital:** 1,250,000 shares; par value \$1; 473,000 shares issued. **Property:** Amy group; 5 patented, 15 unpatented claims, Yreka dist.; Pine Creek, Kellogg. **Development:** Principally by an inclined shaft, 200 ft. deep. Total development, approximately 4500 ft. **Plant:** 35 h. p. hoist and 3 drill Franklin compressor, both electrically driven; sawmill and camp. **Ore:** Lead-silver-zinc. **Men employed:** Average, 2. **Remarks:** Active prospecting throughout the year.

ANCHOR MINING CO.

Office: 325 Main Ave., Spokane, Wash. **Officers:** F. S. Donaldson, Pres.; J. L. Prickett, Sec., both of Spokane, Wash. **Inc.:** Nov. 18, 1897. **Capital:** 1,500,000 shares; par value \$1; all shares issued. **Property:** Anchor group; 8 patented claims, Lelande dist.; Burke. **Development:** Approximately 6000 ft. of underground workings. **Plant:** 20 h. p. hoist and 3 drill I-R compressor, both electrically driven. **Ore:** Lead-silver. **Remarks:** Idle for 10 years.

ARGENTA MINING CO., LTD.

Office: Wallace. **Officers:** W. C. Richardson, Pres.-Mgr., Mullan; C. D. Brock, Wallace. **Inc.:** Dec. 10, 1906. **Capital:** 1,500,000 shares; par value \$1; 1,095,000 shares issued. **Property:** Argenta group; 4 patented claims, Hunter dist.; Mullan. **Development:** 2 tunnels: No. 1, 100 ft. long; No. 2, 900 ft. long. **Ore:** Lead-silver. **Remarks:** A small amount of work done during the year.

ATLANTIC MINING CO.

Office: Wallace. **Officers:** Herman J. Rossi, Pres.; Otto A. Olsson, Sec.-Mgr., both of Wallace. **Inc.:** June 11, 1897. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** Atlantic group; 7 unpatented claims, Beaver dist.; Prichard. **Development:** Principally by one tunnel 300 ft. long. **Ore:** Lead-silver. **Remarks:** Assessment work only.

BANNER-IDAHO MINING CO.

Office: 518 Ziegler Bldg., Spokane, Wash. **Officers:** L. H. Snyder, Pres.; R. H. Finley, Sec., both of Spokane, Wash. **Inc.:** Oct. 5, 1906. **Capital:** 1,500,000 shares; par value \$1; 1,182,750 shares issued. **Property:** Banner group; 5 patented claims, Hunter dist.; Mullan. **Development:** 1 tunnel, 600 ft. long. **Ore:** Lead-silver.

BASIN MINING CO.

Office: Wallace. **Officers:** P. J. Maggy, Sec., Wallace. **Inc.:** June 22, 1915. **Capital:** 1,500,000 shares; par value, 5c; 1,000,000 shares issued. **Property:** 5 patented claims, Lelande dist.; Burke. **Development:** 400 ft. of underground workings. **Remarks:** Idle for a number of years.

BELL MINING CO.

Office: 504 Empire State Bldg., Spokane, Wash. **Officers:** N. J. Flohr, Vice Pres., Wallace; Charles Hussey, Sec., Spokane, Wash. **Inc.:** Oct. 17, 1898. **Capital:** 500,000 shares; par value 25c; 499,500 shares issued. **Property:** 9 patented claims, Lelande dist.; Wallace. **Remarks:** Idle for many years.

BELL OF THE WEST MINING CO.

Office: Wallace. **Officers:** George R. Trask, Pres.-Mgr.; M. E. Trask, Sec., both of Wallace. **Inc.:** Oct. 23, 1899. **Capital:** 1,500,000; par value 5c; all shares issued. **Property:** Bell of the West group; 2 patented, 2 unpatented claims, Placer Center dist.; Wallace. **Development:** 2 tunnels: No. 1, 300 ft. long; No. 2, 700 ft. long with 300 ft. of crosscuts. **Ore:** Lead-silver. **Men employed:** Average, 2. **Remarks:** A small amount of prospecting throughout the year.

BELMONT MINING CO., LTD.

Office: Wallace. **Officers:** William Scheave, Pres.-Mgr.; Frank P. Hess, Sec., both of Wallace. **Inc.:** March 26, 1900. **Capital:** 1,000,000 shares; par value \$1; 188,220 shares issued. **Property:** Belmont group; 14 unpatented claims, Evolution dist.; Osburn. **Development:** Principally by 4 tunnels: No. 1, 1200 ft. long; No. 2, 110 ft. long; No. 3, 250 ft. long; No. 4, 1000 ft. long. **Ore:** Lead-silver, copper. **Men employed:** Average, 1. **Remarks:** A small amount of development work during the year. Five mill assessment levied June 16, 1922.

BENTON MINING CO.

Office: Wallace. **Officers:** John Callahan, Pres., Nine Mile, Wash.; E. G. Gnaedinger, Sec.-Mgr., Wallace. **Inc.:** April 19, 1920. **Capital:** 1,500,000 shares; par value \$1; 1,250,000 shares issued. **Property:** 5 patented claims, Lelande dist.; Burke. **Development:** By 3 tunnels: No. 3, 700 ft. long; No. 4, 600 ft. long; and one vertical shaft 200 ft. deep. **Plant:** Electrically driven hoist and 2 drill compressors. **Remarks:** A small amount of development work during the year which resulted in a very encouraging showing.

BEST CHANCE MINING CO., LTD.

Office: 614 Hyde Bldg., Spokane, Wash. **Officers:** Charles H. Bell, Pres.; Charles A. Gram, Sec., both of Spokane, Wash.; Walter Harr, Mgr., Wallace. **Inc.:** March 29, 1909. **Capital:** 1,500,000 shares; par value \$1; 1,292,000 shares issued. **Property:** Best Chance group; 12 unpatented claims, Evolution dist.; Wallace. **Development:** By 2 tunnels: No. 1, 5000 ft. long; No. 2, 300 ft. long. **Plant:** Gas driven compressor and complete mining equipment. **Ore:** Lead-silver. **Men employed:** Average, 2. **Remarks:** The men employed were on contract work throughout the year.

BIG CREEK LEASING CO.

Office: Kellogg. **Officers:** D. W. Price, Pres.; R. R. Price, Sec., both of Kellogg. **Inc.:** June 23, 1913. **Capital:** 5,000 shares; par value \$10; 3873 shares issued. **Property:** Majestic group; 2 unpatented claims, Big Creek, Yreka dist.; Kellogg. **Ore:** Lead-silver. **Remarks:** Assessment work only.

BIG CREEK MINING CO., LTD.

Office: Wallace. **Officers:** G. Scott Anderson, Pres.-Mgr.; W. W. Smith, Sec., both of Wallace. **Inc.:** Sept. 26, 1902. **Capital:** 2,000,000 shares; par value \$1; 1,496,257 shares issued. **Property:** Big Creek group; 5 patented, 4 unpatented claims, Yreka dist.; Wallace. **Development:** By 4 tunnels with 4 intermediate levels: No. 1, 590 ft. long; No. 2, 520 ft. long; No. 3, 2550 ft. long; No. 4, 2860 ft. long. Total development, approximately 7300 ft. **Plant:** MINE: Electrically driven I-R compressor; complete mining equipment. **MILL:** 75-ton concentrator. **Ore:** Lead-silver. **Men employed:** Average, 23. **Remarks:** Property taken over and operated during the year by the Bunker Hill & Sullivan M. & C. Co., which also did an extensive amount of development work.

BIG DIVIDE MINING CO., LTD.

Office: Wallace. **Officers:** Alexander Murphy, Pres.-Mgr., Wallace; Everett H. Pattison, Sec., Long Beach, Calif. **Inc.:** Aug. 23, 1904. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** Big Divide group; 10 patented claims, Lelande dist.; Black Bear. **Plant:** Large air compressor driven by 150 h. p. electric motor.

BIG ELK MINING CO., LTD.

Office: Wallace. **Officers:** Peter Peterson, Pres.-Mgr., Saltese, Mont.; A. H. Featherstone, Sec., Wallace. **Inc.:** April 26, 1909. **Capital:** 2,000,000 shares par value \$1; all shares issued. **Property:** Big Elk group; 17 unpatented claims, St. Joe dist.; Adair. **Ore:** Copper. **Remarks:** Assessment work only. One mill assessment levied July 12, 1922.

BIG IT MINING & MILLING CO.

Officers: H. S. Davenport, Pres., Enaville; M. L. Pratt, Sec.-Mgr., Kellogg; **Inc.:** Dec. 5, 1916; charter forfeited Dec. 1, 1920. **Capital:** 1,500,000 shares; par value 10c; 983,678 shares issued. **Property:** Big It group; 17 unpatented claims, Pine Creek, Yreka dist.; Kellogg. **Development:** Principally by 2 tunnels: No. 1, 250 ft. long; No. 2, 530 ft. long. **Ore:** Lead-silver-zinc. **Remarks:** Small amount of development work done during the year.

BITTER ROOT MOUNTAIN MINING CO.

Office: Spokane, Wash. **Officers:** F. A. Edgerton, Pres., 16 Straight St., Rochester, N. Y. **Inc.:** May 6, 1901. **Capital:** 1,500,000 shares; par value 5c; 1,200,000 shares issued. **Property:** Lookout group; 3 patented claims, Hunter dist.; Mullan. **Remarks:** Inactive since 1900.

BLACK BEAR MINES CO.

Office: Wallace. **Officers:** C. A. Hagan, Pres., Moscow; Peter Bernier, Vice Pres.; H. J. Arnett, Sec., both of Wallace. **Inc.:** Feb. 24, 1917. **Capital:** 2,000,000 shares; par value 20c; 1,036,619 shares issued. **Property:** Black Bear group; 4 patented, 2 unpatented claims, Lelande dist.; Black Bear. **Development:** Principally by one crosscut tunnel 2500 ft. long with 1500 ft. of drifts on the vein. **Plant:** 12x14 electrically driven compressor. **Ore:** Lead-silver-zinc.

BLACK HAWK MINING & DEVELOPING CO., LTD.

Office: Wallace. **Officers:** Alfred Page, Pres., Spokane, Wash.; A. W. Hoover, Sec.; Frederick Burbidge, Mgr., both of Wallace. **Inc.:** Aug. 19, 1901. **Capital:** 1,500,000 shares; par value 10c; 1,332,352 shares issued. **Property:** Black Hawk group; 13 patented claims, Yreka dist.; Kellogg. **Development:** By 2 tunnels: Black Hawk 2920 ft. long; Page 2600 ft. long. **Remarks:** Not operating.

BLACK ROCK MINING CO.

Office: Kellogg. **Officers:** J. C. McEachran, Pres.; G. W. Sumner, Sec., both of Spokane, Wash.; J. A. McEachran, Mgr., Kellogg. **Inc.:** July 26, 1917. **Capital:** 2,000,000 shares; par value 10c; all shares issued. **Property:** Black Rock group; 12 unpatented claims, Yreka dist.; Kellogg. **Development:** Numerous cuts and one tunnel 200 ft. long. **Ore:** Copper, lead-silver. **Remarks:** Assessment work only.

BLAINE & EMMETT MINING CO., LTD.

Office: Kellogg. **Officers:** Merrill Heblethwaite, Pres.-Mgr., Prichard; R. W. Skeman, Sec., Kellogg. **Inc.:** Dec. 20, 1909. **Capital:** 1,000,000 shares; par value \$1; 458,604 shares issued. **Property:** Blaine & Emmett group; 4 unpatented claims, Eagle dist.; Prichard. **Development:** 3 tunnels: No. 1, 50 ft. long; No. 2, 300 ft. long; No. 3, 600 ft. long. **Remarks:** Assessment work only. Two and one-half mill assessment levied Jan. 4, 1922.

BLUE GROUSE MINING CO., LTD.

Office: Wallace. **Officers:** Donald A. Callahan, Pres., Wallace; C. W. Newton, Sec.-Mgr., Interstate. **Inc.:** May 11, 1898. **Capital:** 1,500,000 shares; par value \$1; 1,166,269 shares issued. **Property:** Blue Grouse group; 4 unpatented claims, Beaver dist.; Interstate. **Development:** Approximately 1900 ft. of underground workings, the principal of which is one tunnel 500 ft. long. **Ore:** Lead-silver-zinc. **Remarks:** Idle.

BLUE RIBBON MINING CO.

Office: 601 N. Monroe St. Spokane, Wash. **Officers:** N. C. Armstrong, Pres., 1519 Augusta Ave., Spokane, Wash., Al Harris, Sec., 601 N. Monroe St., Spokane, Wash. **Inc.:** Oct. 22, 1914. **Capital:** 1,500,000 shares; par value 10c; 250,000 shares issued. **Property:** Blue Ribbon group; 7 unpatented claims, Hunter and Lelande dists.; Burke. **Development:** Principally by one tunnel 2200 ft. long. **Remarks:** Assessment work only.

BLUE STAR MINING & MILLING CO., LTD.

Office: Kingston. **Officers:** C. M. Powell, Pres., San Diego, Calif.; A. C. Morbeck, Sec., Kingston. **Inc.:** June 8, 1909. **Capital:** 1,000,000 shares; par value \$1; 300,000 shares issued. **Property:** 8 patented claims, Yreka dist.; Kingston. **Remarks:** "This property has not been operating for several years."

BLUE WING MINING CO., LTD.

Office: Wallace. **Officers:** Peter Zanetti Pres.; Herman J. Rossi, Sec., both of Wallace. **Inc.:** July 8, 1901. **Capital:** 1,500,000 shares; par value 10c; 820,000 shares issued. **Property:** Blue Wing group; 3 unpatented claims, Placer Center dist.; Wallace. **Development:** 3 tunnels. **Ore:** Lead-silver.

BOBBY ANDERSON GROUP MINING CO.

Office: Wallace. **Officers:** Theo. Brown, Pres., Kellogg; Herman J. Rossi, Sec., Wallace. **Inc.:** June 16, 1906. **Capital:** 1,500,000 shares; par value \$1; 1,105,000 shares issued. **Property:** Bobby group; 5 unpatented claims, Yreka dist.; Kellogg. **Development:** 3 tunnels and 1 shaft. **Ore:** Lead-zinc-silver. **Remarks:** Assessment work only.

BOSS ZINC MINING CO.

Office: Wallace. **Officers:** H. Lieb, Pres.-Mgr.; A. F. Lieb, Sec.-Treas., both of Wallace. **Inc.:** Sept. 14, 1915. **Capital:** 1,000,000 shares; par value 5c; all shares issued. **Property:** Boss Zinc group; 5 unpatented claims, Evolution dist.; Osburn. **Development:** 2 tunnels: No. 1, 350 ft. long; No. 2, 225 ft. long. **Ore:** Lead-zinc-silver.

BOULDER CREEK MINING & MILLING CO., LTD.

Office: 922 Old National Bank Bldg., Spokane, Wash. **Officers:** Leo Greenough, Pres.; W. J. Beaton, Sec., both of Spokane, Wash. **Inc.:** Dec. 1, 1906. **Capital:** 1,500,000 shares; par value \$1; 976,239 shares issued. **Property:** Central; 1 patented claim, Hunter dist.; Mullan. **Remarks:** Inactive since 1912.

BULLION MINING CO., LTD.

Office: Wallace. **Officers:** William Squance, Pres.; James H. Taylor, Sec.-Mgr., both of Wallace. **Inc.:** Dec. 5, 1902. **Capital:** 1,500,000 shares; par value \$1; shares issued, unknown. **Property:** 3 patented, 14 unpatented claims, St. Joe dist.; Mullan. **Development:** 3 tunnels; No. 1, 600 ft. long; No. 2, 1200 ft. long; No. 3, 4400 ft. long; 1 vertical shaft 100 ft. deep. **Plant:** Pelton water wheel driving an I-R compressor. **Ore:** Copper-gold. **Men employed:** Average, 3. **Remarks:** A large amount of development work during the year with gratifying results.

BUNKER HILL & SULLIVAN MINING & CONCENTRATING CO.

Office: Kellogg. **Officers:** F. W. Bradley, Pres., 1022 Crocker Bldg., San Francisco, Calif.; George F. Holman, Sec., Chamber of Commerce Bldg., Portland, Ore.; Stanly A. Easton, Mgr., Kellogg. **Inc.:** Aug. 20, 1903. **Capital:** 327,000 shares; par value \$10; all shares issued. **Property:** Bunker Hill; 293 patented, 34 unpatented claims, Yreka dist.; Kellogg. **Development:** The principal adit is the Kellogg tunnel, which is 18,000 ft. long, in which are the two principal inclined shafts, one of which is known as the White Raise, and the other the main shaft, which is approximately 2200 ft. long, giving a vertical depth of 1400 ft. below the Kellogg tunnel level. In the main shaft are 9 intermediate levels. Total development, approximately 55 miles. **Plant:** MINE: Two electrically driven hoists, two electrically driven I-R compressors, one steam driven Nordberg compressor. Trolley locomotive haulage in Kellogg tunnel; storage battery locomotive haulage in intermediate levels. Complete and modern machine shop, blacksmith shop and change house. **MILL:** Three complete and modern concentrators, including flotation. Daily capacity approximately 2000 tons. **Ore:** Lead-silver. **Men employed:** In mine, mill and smelter, average, 845.

BUNKER HILL SMELTER

Officers: Frank M. Smith, Director, 1117 Paulsen Bldg., Spokane, Wash.; M. H. Sullivan, Supt., Kellogg. **Remarks:** This smelter was erected during 1917, since which time it has been continually enlarged and improved and is now one of the most modern, complete and up-to-date plants in the United States. The smelting plant covers an area of about 30 acres and consists of complete buildings and equipment for sampling, roasting, sintering, smelting and refining lead, silver and gold ores. In addition to refining lead, silver and gold, antimonial lead and copper sulphate are also produced. The principal supply of ore is from the company's own mine and the mines of the Coeur d'Alene district. The company is doing a general custom business and is drawing ore from all of the northwestern states as

well as from British Columbia and is becoming a strong competitor in the smelting business. This smelter and its operations are fully described and illustrated in many of the articles listed under the bibliography of Shoshone County.

REMARKS

This company is the largest dividend payer and maintains the largest pay roll of any mine in Idaho; it is also the largest producer of lead-silver ore in the State, if not in the world; and is one of the limited number of companies in the United States that mine, mill, smelt, refine, manufacture and sell lead ore and lead products. The enterprise, particularly the mine and mill, has been established for such a long period and all operations have become so well founded that it has practically expanded into a manufacturing operation. The mine is opened by over 55 miles of underground workings and has a sufficient tonnage of ore reserves to assure many years of continued operations.

During the past few years this organization has been actively engaged in prospecting and in developing mining properties throughout the State and is always anxious to help the prospector and those with mines requiring financing. The company is to be complimented upon this attitude as it is adding greatly to the development of the mineral resources of the State.

The management is progressive and intelligent and an unusual amount of initiative is shown in the conduct of the affairs of the company and in civic activities. An excellent spirit of cooperation has been created and maintained in the employees and the management is unusually alert in safety supervision and in providing for the welfare of the men employed.

BURKE MINING CO., LTD.

Office: Burke. **Officers:** Earnest Brewer, Pres., Gem; John C. Glahe, Sec., Wallace. **Inc.:** May 31, 1902. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** 12 patented claims, Lelanda dist.; Burke. **Development:** 2 tunnels: No. 1, 125 ft. long; No. 2, 1000 ft. long. **Ore:** Lead-silver.

CALEDONIA MINING CO.

Office: Kellogg. **Officers:** Stanly A. Easton, Pres.-Mgr.; Lee Prather, Sec., both of Kellogg. **Inc.:** July 1, 1907. **Capital:** 2,605,000 shares; par value \$1; all shares issued. **Property:** Caledonia; 2 patented claims, Yreka dist.; Kellogg. **Development:** Approximately 18,000 ft. of underground workings. **Plant:** Equipment rented from Bunker Hill & Sullivan M. & C. Co. **Ore:** Silver-lead. **Men employed:** Average, 7. **Remarks:** A small production was maintained throughout the year.

CALIFORNIA GULCH PLACER MINING CO.

Office: Wallace. **Officers:** A. O. Rickert, Pres.-Mgr., Sharron, Wash.; Julian Hammond, Sec., Gem. **Inc.:** April 26, 1920. **Capital:** 200,000 shares; par value 25c; 47,500 shares issued. **Property:** 3 unpatented placer claims, Eagle dist.; Murray. **Ore:** Placer gold. **Remarks:** Assessment work only.

CALLAHAN ZINC-LEAD CO.

Office: 61 Broadway, New York City. **Officers:** John Borg, Pres.; H. T. McMeekin, Sec.-Treas., both of New York City; C. W. Newton, Mgr., Interstate. **Inc.:** July 18, 1912 as Consolidated Interstate Mining Co.; name changed March 25, 1921. **Capital:** 500,000 shares increased to 1,000,000 on Oct. 19, 1922; par value \$10; 465,000 shares issued prior to increase in capitalization.

Property: Interstate-Callahan; 78 patented, 2 unpatented claims, Beaver dist.; Interstate. **Development:** Principal development is main transportation tunnel which is 5500 ft. long and a three-compartment vertical shaft 2000 ft. deep. Total development, approximately 8 miles. **Plant:** MINE: Two single drum air driven hoists and one 250 h. p. electrically driven double drum hoist; three large I-R electrically driven compressors; trolley locomotive haulage in main tunnel. Complete and modern blacksmith shop, machine shop, sawmill, mine equipment, camp and company buildings. **MILL:** 600-ton concentrator, including flotation. **Ore:** Zinc-lead-silver. **Men employed:** Average, 400 since resuming operation. **Remarks:** The low price of zinc and high freight rates compelled this property to remain in idleness for two years and it did not resume operations until November 1, 1922. Since then it has been brought up to capacity production as fast as possible, and at the close of the year was running with a full force. This property is one of the largest zinc mines in the United States. It is completely equipped with modern mine and mill plants, is well financed and intelligently directed. In consolidating with the Galena Mining Co. its resources were greatly augmented.

CARBONATE HILL MINING CO.

Office: 303 Hyde Block, Spokane, Wash. **Officers:** W. D. Lord, Pres., John E. Hoppe, Sec., both of Spokane, Wash. **Inc.:** Sept. 4, 1906. **Capital:** 1,500,000 shares; par value \$1; shares issued, unknown. **Property:** Carbonate Hill group; 10 patented, 2 unpatented claims, Hunter dist.; Mullan. **Remarks:** All assets sold to Idaho-Carbonate Hill Consolidated Mining Co.

CARBONATE MINING & MILLING CO.

Office: Kellogg. **Officers:** C. J. Weise, Vice Pres., Wardner; John A. Rock, Sec., Kellogg. **Inc.:** Oct. 7, 1899. **Capital:** 1,000,000 shares; par value \$1; 565,000 shares issued. **Property:** Carbonate group; 4 unpatented claims, Pine Creek, Yreka dist.; Kellogg. **Development:** 2 tunnels. **Ore:** Lead-silver. **Remarks:** Assessment work only. One mill assessment levied April 28, 1922.

CARNEY COPPER CO., LTD.

Office: Mullan. **Officers:** J. L. Martin, Pres.-Mgr.; C. D. Miller, Sec., both of Mullan. **Inc.:** Nov. 24, 1906. **Capital:** 1,500,000 shares; par value \$1; 1,327,003 shares issued. **Property:** Carney group; 9 unpatented claims, Hunter dist.; Mullan. **Development:** 3 tunnels: No. 1, 500 ft. long; No. 2, 1500 ft. long; No. 3, 550 ft. long. **Ore:** Lead-silver. **Remarks:** No. 3 tunnel extended under contract during the year.

CEDAR CREEK MINING & DEVELOPMENT CO., LTD.

Office: Wallace. **Officers:** J. W. Weyer, Pres.; William Backer, Sec., both of Wallace; John M. Weyer, Mgr., Murray. **Inc.:** June 23, 1905. **Capital:** 1,000,000 shares; par value \$1; 694,317 shares issued. **Property:** Cedar Creek group; 19 unpatented claims, Summit dist.; Murray. **Development:** 3 tunnels: No. 1, 1130 ft. long; No. 2, 1950 ft. long; No. 3, 3475 ft. long. Total development, approximately 7000 ft. **Plant:** 12x12 water driven compressor; complete mining equipment and camp. **Ore:** Lead-silver-zinc. **Men employed:** Average, 4. **Remarks:** Economically and extensively developed throughout the year. A large amount of ore has been exposed and the indications are that this property will soon be a new producer. Five mill assessment levied Nov. 7, 1922.

CENTRAL MINING CO.

Office: Burke, Box D. **Officers:** M. V. McNamee, Pres.; F. H. Richardson, Sec., F. C. Richardson, Mgr., all of Burke. **Inc.:** Oct. 28, 1911. **Capital:** 1,500,000 shares; par value \$1; all shares issued. **Property:** Central group; 5 unpatented claims, lying between Hercules and Oom Paul; Lelande dist.; Burke. **Development:** Approximately 1100 ft., principally tunnels. **Ore:** Lead-silver. **Men employed:** Average, 3. **Remarks:** Machinery and equipment of Oom Paul mine used, as well as the Oom Paul tunnel, through which the company is developing its property.

CHESTER MINING CO., LTD.

Officers: P. P. Weber, Pres.; C. W. Simmons, Asst. Sec., both of Kellogg. **Inc.:** July 31, 1900. **Capital:** 1,000,000 shares; par value \$1; 905,581 shares issued. **Property:** 6 patented claims, Yreka dist.; Kellogg. **Development:** Principally by one tunnel 1500 ft. long.

CLARK-MONTANA REALTY CO.

Office: 503 Miner Bldg., Butte, Mont. **Officers:** W. A. Clark, Pres.; J. L. Templeman, Sec.; William C. Siderfin, Mgr., all of Butte, Mont. **Inc.:** May 7, 1921. **Capital:** 35,000 shares; par value \$100; 15,000 (?) shares issued. **Property:** Sunset group; 3 patented claims, Beaver dist.; Wallace. **Development:** By one tunnel 3600 ft. long and a vertical shaft 800 ft. deep with four intermediate levels. Total development approximately 10,000 ft. **Ore:** Lead-silver-zinc. **Men employed:** 4 leasers. **Remarks:** The leasers were busy throughout the year and made a few small shipments.

CLEAR GRIT MINING CO., LTD.

Office: Wallace. **Officers:** F. C. Rood, Pres.-Mgr., Walla Walla, Wash.; O. W. Lewis, Sec., Wallace. **Inc.:** May 9, 1906. **Capital:** 1,000,000 shares; par value \$1; 811,895 shares issued. **Property:** 6 unpatented claims, Beaver dist.; Prichard. **Development:** Approximately 1800 ft. of workings. **Ore:** Lead-silver. **Remarks:** A small amount of development work done during the year.

CLIMAX SILVER-LEAD MINING CO.

Officers: D. C. McKissick, Pres.; H. V. Edwards, Sec.-Mgr., both of Wallace. **Inc.:** April 22, 1914. **Capital:** 1,500,000 shares; par value 25c; 1,150,000 shares issued. **Property:** Climax group; 2 patented, 2 unpatented claims, Lelande dist.; Wallace. **Development:** By 2 tunnels: No. 1, 120 ft. long; No. 2, 2300 ft. long. **Ore:** Lead-silver. **Remarks:** A small amount of development work done under contract during the year.

COEUR D'ALENE CHAMPION MINING CO.

Office: 310 Hyde Blk., Spokane, Wash. **Officers:** M. A. Doyle, Pres.; James Keith, Sec.-Mgr., both of Spokane, Wash. **Inc.:** Jan. 22, 1907. **Capital:** 1,500,000 shares; par value \$1; 842,625 shares issued. **Property:** Champion group; 17 unpatented claims, near the head of Military Gulch; Hunter and Lelande dists.; Burke. **Development:** Principally by 4 tunnels: No. 1, 1060 ft. long; No. 2, 700 ft. long; No. 3, 2800 ft. long; No. 4, 200 ft. long. **Ore:** Lead-silver. **Remarks:** Assessment work only.

COEUR D'ALENE CRESCENT MINING CO.

Officers: J. B. Millspaugh, Vice Pres.; F. W. Mauser, Sec., both 404 Jamieson Bldg., Spokane, Wash. **Inc.:** Dec. 12, 1913. **Capital:** 1,250,000 shares; par value \$1; 675,000 shares issued. **Property:** Evolution group; 6 unpatented claims, Evolution dist.; Osburn. **Development:** By one tunnel, approximately 500 ft. long and a vertical shaft 300 ft. deep. **Plant:** An old steam driven hoist. **Ore:** Silver-lead. **Men employed:** Average 2. **Remarks:** A small amount of prospecting work throughout the year, which resulted in a good showing of ore.

COEUR D'ALENE EMPIRE MINING & MILLING CO.

Office: 427 Rookery Bldg., Spokane, Wash. **Officers:** F. D. Garrett, Pres.; A. Herman, Sec.-Mgr., both of Spokane, Wash. **Inc.:** April 13, 1917. **Capital:** 1,500,000 shares; par value \$1; 1,072,750 shares issued. **Property:** Empire group; 6 unpatented claims, Yreka dist.; Kellogg. **Development:** By 2 tunnels; No. 1, 800 ft. long; No. 2, 1460 ft. long. **Ore:** Lead-silver. **Remarks:** Assessment work only for the past four years.

COEUR D'ALENE JUMBO MINING CO.

Office: Wallace. **Officers:** Fred Prichard, Pres.-Mgr.; Elmer Johnson, Sec., both of Wallace. **Inc.:** May 8, 1916. **Capital:** 1,500,000 shares; par value 10c; shares issued, unknown. **Property:** 6 unpatented claims, Evolution dist.; Wallace. **Development:** Principally by one tunnel, 500 ft. long. **Remarks:** Three mill assessment levied June 8, 1922.

COEUR D'ALENE LEAD & SILVER MINING CO.

Office: 720 Peyton Bldg., Spokane, Wash. **Officers:** J. M. Porter, Pres.-Mgr.; H. S. Stoolfire, Sec., both of Spokane, Wash. **Inc.:** Jan. 3, 1906. **Capital:** 1,000,000 shares; par value 25c; 720,000 shares issued. **Property:** 4 patented claims, Hunter dist.; Mullan. **Remarks:** Inactive.

COEUR D'ALENE MINING CO.

Office: Ames Bldg., Boston, Mass. **Officers:** Burton E. Eames, Pres.; John P. Wright, Sec., both of Boston, Mass. **Inc.:** July 20, 1900. **Capital:** 125,000 shares; par value \$10; 118,586 shares issued. **Property:** Under lease to Yukon Gold Co., which see.

COEUR D'ALENE MINING & SMELTING CO.

Office: Wallace. **Officers:** A. D. Wallace, Pres.; Dennis Goggin, Sec.; Pat Brady, Mgr., all of Wallace. **Inc.:** July 18, 1904. **Capital:** 1,000,000 shares; par value \$1; 768,000 shares issued. **Property:** 7 unpatented claims, Placer Center dist.; Wallace. **Development:** By 2 tunnels; No. 1, 1000 ft. long; No. 2, 300 ft. long. **Ore:** Lead-silver.

COEUR D'ALENE SILVER-LEAD MINING CO.

Office: 1004 E. 8th St., Spokane, Wash. **Officers:** Charles J. Heidenreich, Pres., Spokane, Wash. **Inc.:** June 16, 1916; charter forfeited Dec. 1, 1922. **Capital:** 1,000,000 shares; par value \$1; 754,800 shares issued. **Property:** 6 patented, 2 unpatented claims, Hunter dist.; Mullan. **Development:** By 2 tunnels; No. 1, 960 ft. long; No. 2, 410 ft. long. **Ore:** Lead-silver. **Remarks:** Assessment work only.

COEUR D'ALENE SYNDICATE MINING CO.

Office: Wallace. **Officers:** Rush J. White, Mgr., Wallace. **Inc.:** Sept. 16, 1922. **Capital:** 1,700,000 shares; 200,000 preferred, par value \$5; 700,000 common, par value \$1; shares issued, unknown. **Property:** Flynn and Senator groups held under lease and bond; 22 patented, 15 unpatented claims, Lelande dist.; Gem. **Development:** Over 9000 ft. of underground workings. **Plant:** Electrically driven 900 cu. ft. I-R compressor; drill sharpener and complete mining equipment; Hoar shovel. **Ore:** Lead-silver. **Men employed:** Average, 20. **Remarks:** This company has been carrying on one of the most intensive development campaigns that has ever been undertaken in the Coeur d'Alene district. This prospecting work included a large amount of diamond drilling.

COLUMBIA COPPER CO., LTD.

Office: Wallace. **Officers:** Joseph Huber, Pres.-Mgr., Mullan; C. W. Betts, Sec., Wallace. **Inc.:** April 24, 1914. **Capital:** 2,500,000 shares; par value \$1; 1,303,635 shares issued. **Property:** Columbia group; 22 unpatented claims, Hunter dist.; Mullan. **Development:** By 11 tunnels, totaling approximately 2400 ft. **Ore:** Lead-silver, copper.

COLUMBUS MINING CO. OF COEUR D'ALENE

Office: Wallace. **Officers:** Daniel J. McElhatton, Pres., 2432 N. Marshall St., Philadelphia, Pa.; E. P. Gallagher, Sec., 811 Lincoln Bldg., Philadelphia, Pa. **Inc.:** Oct. 10, 1916. **Capital:** 1,000,000 shares; par value \$1; 600,000 shares issued. **Property:** Columbus group; 3 patented, 14 unpatented claims; Eagle dist.; Prichard. **Development:** Principally by 2 tunnels: Tributary, 1400 ft. long; Eagle, 1200 ft. long. **Plant:** Steam driven compressor and complete mining equipment. **Ore:** Lead-silver. **Men employed:** Average, 4. **Remarks:** A small amount of development and prospecting work during the year.

COLUSA MINING CO., LTD.

Office: Wallace. **Officers:** William Thyson, Pres., Bellingham, Wash.; Paul Leuchel, Sec., Wallace. **Inc.:** June 4, 1908. **Capital:** 1,000,000 shares; par value \$1; 470,000 shares issued. **Property:** 1 unpatented claim on Pine Creek, Yreka dist.; Kellogg. **Remarks:** Assessment work only.

COPPER CHIEF MINING CO.

Office: Wallace. **Officers:** D. E. Wickward, Pres.; James H. Taylor, Sec.-Mgr., both of Wallace. **Inc.:** Sept. 25, 1907. **Capital:** 1,000,000 shares; par value \$1; shares issued, unknown. **Property:** Copper Chief group; 11 unpatented claims, St. Joe dist.; Mullan. **Development:** An interest in Bul lion No. 3 tunnel. **Plant:** I-R compressor driven by Pelton water wheel and complete mining equipment. **Ore:** Copper-gold.

COPPER PLATE MINING CO., LTD.

Office: Mullan. **Officers:** John Hendrickson, Pres.; J. W. Hutchins, Sec., both of Mullan. **Inc.:** Jan. 23, 1902. **Capital:** 1,250,000 shares; par value 10c; 585,080 shares issued. **Property:** Copper Plate group; 6 claims, Hunter dist.; Mullan. **Development:** Approximately 3000 ft. **Ore:** Lead-silver. **Remarks:** Assessment work only.

C. & R. MINING CO.

Office: Wallace. **Officers:** Edwin Roberts, Pres.; Herman J. Rossi, Sec., both of Wallace. **Inc.:** June 16, 1904. **Capital:** 1,250,000 shares; par value \$1; 1,170,000 shares issued. **Property:** C & R group; 8 patented, 1 unpatented claim; Lelande and Placer Center dists.; Wallace. **Development:** By 3 tunnels. **Plant:** Electrically driven compressor. **Ore:** Lead-silver. **Remarks:** A large amount of development work, the outcome of which was very encouraging, was done under contract during the year.

CUBA MINING CO.

Office: Wallace, P. O. Box 236. **Officers:** D. L. Hopkins, Pres., Portland, Ore.; John Dolan, Sec.-Mgr., Wallace. **Inc.:** Nov 18, 1899. **Capital:** 1,000,000 shares; par value \$1; 963,315 shares issued. **Property:** Cuba group; 2 patented claims, Placer Center dist.; Wallace. **Development:** 2 tunnels; No. 1, 500 ft. long; No. 2, 1100 ft. long. **Ore:** Lead-silver.

DAISY MINING CO., LTD.

Officers: J. A. Bean, Vice Pres.-Mgr., 1089 Leighto Ave., Los Angeles, Calif.; C. D. Miller, Sec., Mullan. **Inc.:** Dec. 1, 1906. **Capital:** 1,500,000 shares; par value \$1; 1,327,003 shares issued. **Property:** Daisy group; 2 unpatented claims, Hunter dist.; Mullan. **Development:** Principally by one tunnel 1500 ft. long **Ore:** Lead-silver.

DEEP WONDER MINING CO.

Office: 307 Ziegler Bldg., Spokane, Wash. **Officers:** James J. Taylor, Pres., Wallace; Charles J. Kapps, Sec.-Mgr., Spokane, Wash. **Inc.:** Dec. 13, 1912; charter forfeited Dec. 1, 1916. **Capital:** 2,000,000 shares; par value \$1; all shares issued. **Property:** Deep Wonder group; 12 patented claims, Hunter dist.; Mullan. **Remarks:** Idle since 1914.

DOBSON PASS MINING CO.

Office: Wallace. **Officers:** J. P. Rogers, Pres.-Mgr.; S. M. Gallagher, Sec., both of Wallace. **Inc.:** July 14, 1900. **Capital:** 1,000,000 shares; par value 10c; 500,000 shares issued. **Property:** Dobson Pass group; 5 unpatented claims, Placer Center dist.; Wallace. **Remarks:** Assessment work only.

DOUGLAS MINING CO., LTD.

Office: Wallace. **Officers:** Frank F. Johnson, Pres., Boise; R. S. Clough, Sec.; Herman J. Rossi, Mgr., both of Wallace. **Inc.:** Oct. 24, 1903. **Capital:** 1,200,000 shares; par value \$1; 853,500 shares issued. **Property:** Douglas group; 10 patented, 2 unpatented claims, Pine Creek, Yreka dist.; Kellogg. **Plant:** Electrically driven hoist and compressor. Complete mining equipment. **Ore:** Lead-silver-zinc. **Men employed:** One watchman. **Remarks:** Three mill assessment levied March 18, 1922.

DU BOIS MINING CO.

Office: Kellogg. **Officers:** H. E. Gunter, Pres., Du Bois, Pa.; J. B. Eherhert, Sec.-Treas., Punxsutawney, Pa.; H. H. Rhodes, Mgr., Kellogg. **Inc.:** Aug. 9, 1914. **Capital:** 1,000,000 shares; par value \$1; 300,000 shares issued. **Property:** 6 patented claims, Yreka dist.; Kellogg.

EAST ALAMEDA MINING CO., LTD.

Office: Wallace. **Officers:** Sam Bowers, Pres., Wallace; Everett H. Pattison, Sec., Long Beach, Calif.; Alexander Murphy, Mgr., Wallace. **Inc.:** July 25, 1907. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** East Alameda group; 2 patented, 1 unpatented claim, Lelande dist.; Black Bear.

EASTERN STAR MINING CO., LTD.

Office: Burke. **Officers:** J. John Stone, Pres.-Mgr., Burke; John C. Glahe, Sec., Wallace. **Inc.:** Aug. 29, 1916. **Capital:** 1,000,000 shares; par value \$1; 600,000 shares issued. **Property:** Eastern Star group; 18 unpatented claims, Lelande dist.; Burke. **Development:** 2 tunnels: No. 1, 150 ft. long; No. 2, 800 ft. long. **Ore:** Lead-silver. **Men employed:** Average, 2. **Remarks:** Small amount of development work during the year.

EAST HECLA MINING CO., LTD.

Office: Wallace. **Officers:** John P. Gray, Pres., Coeur d'Alene; A. H. Featherstone, Sec., Wallace. **Inc.:** Nov. 24, 1906. **Capital:** 1,500,000 shares; par value \$1; all shares issued. **Property:** East Hecla group; 4 patented claims, Hunter dist.; Mullan. **Remarks:** Idle for a number of years.

EAST HERCULES EXTENSION MINING CO.

Office: 337 Rookery Bldg., Spokane, Wash. **Officers:** J. B. Millsbaugh, Pres.; W. O. Appelquist, Acting Sec., both of Spokane, Wash. **Inc.:** Nov. 1, 1906. **Capital:** 1,500,000 shares; par value \$1; 1,225,100 shares issued. **Property:** 4 unpatented claims, Lelande dist.; Burke. **Remarks:** Assessment work only for a number of years.

EAST STANDARD MINING CO.

Office: Wallace. **Officers:** C. E. Inskip, Sec., Wallace. **Inc.:** Aug. 9, 1911. **Capital:** 1,000,000 shares; par value \$1; 709,391 shares issued. **Property:** 4 patented claims, Lelande dist.; Burke. **Remarks:** One mill assessment levied Aug. 11, 1922.

ECLIPSE MINING CO.

Office: 1729 Mallon Ave., Spokane, Wash. **Officers:** E. W. Conrad, Pres.-Mgr.; L. W. B. Conrad, Sec., both of Spokane, Wash. **Inc.:** April 20, 1907 as the Lead King Mining Co. Name changed Oct. 9, 1917. **Capital:** 1,500,000 shares; par value \$1; 1,217,160 shares issued. **Property:** Eclipse group; 19 unpatented claims, Evolution dist.; Osburn. **Development:** 11 tunnels and cuts, approximating 2800 ft. **Ore:** Lead-silver, copper. **Men employed:** Average, 3. **Remarks:** Small amount of development work during the year.

ELDORADO MINING & SMELTING CO., LTD.

Office: Wallace. **Officers:** J. C. Waddell, Pres., Rose Lake; G. W. Dougherty, Sec.; Dr. R. B. Lundy, Mgr., both of Wallace. **Inc.:** July 5, 1907. **Capital:** 1,250,000 shares; par value 10c; 1,126,690 shares issued. **Property:** 1 patented, 3 unpatented claims, Yreka dist.; Wallace.

ELGIN & OGDEN MINING CO.

Office: Kellogg. **Officers:** Wesley J. Herring, Pres.-Mgr.; Lester S. Harrison, Sec., both of Kellogg. **Inc.:** July 11, 1921; charter forfeited Dec. 1, 1921. **Capital:** 1,000,000 shares; par value 5c; 611,703 shares issued. **Property:** 5 claims, Evolution dist.; Kellogg.

ELK MINING CO.

Office: Mullan. **Officers:** John F. Carson, Pres.-Mgr.; C. Carson, Sec., both of Mullan. **Inc.:** Nov. 3, 1906. **Capital:** 1,000,000 shares; par value \$1; 720,000 shares issued. **Property:** Elk group; 3 patented claims, Hunter dist.; Mullan. **Development:** 3 tunnels: No. 1, 1000 ft. long; No. 2, 170 ft. long; No. 3, 200 ft. long. **Ore:** Lead-silver. **Remarks:** A small amount of development work during the year under the direction of John F. Carson.

FAIRVIEW MINING CO., LTD.

Office: Mullan. **Officers:** James Quinlan, Pres.; Mary Quinlan, Mgr., both of Mullan. **Inc.:** March 13, 1905. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** 3 unpatented claims, Hunter dist.; Mullan. **Remarks:** Assessment work only.

FEDERAL MINING & SMELTING CO.

Office: 120 Broadway, New York City. **Officers:** F. H. Brownell, Pres.; J. L. Martin, Sec., both of New York City; Frederick Burbidge, Mgr., Wallace. **Inc.:** Sept. 24, 1903. **Capital:** 200,000 shares preferred, 100,000 shares common; par value \$100; 120,000 shares preferred; 60,000 shares common issued.

MORNING GROUP

Property: 52 patented, 17 unpatented claims, Hunter dist.; Mullan. **Development:** The two principal tunnels are No. 5, 1600 ft. long, and No. 6, the main transportation tunnel, 9500 ft. long. The principal shaft, which is located in No. 6 tunnel, is a vertical, four compartment shaft, 2450 ft. deep, with 16 intermediate levels. Total development, approximately 31 miles. **Plant:** MINE: Fraser-Chalmers double reel duplex Corliss hoist, size 20x60 inch stroke; one Nordburg single reel gear hoist driven by 300 h. p. electric motor; one water driven 5200 cu. ft. Ricks compressor; one Laidlaw-Dunn-Gordon 3200 cu. ft. compressor, and two Ingersoll-Rand 2500 cu. ft. compressors; all electrically driven; complete mining equipment, machine shops, sawmill, company buildings and hotel. **HAULAGE:** 500 volt electric in main tunnel; 250 volt electric; and two storage battery locomotives in intermediate levels. **MILL:** 1200-ton concentrator, including flotation. Two ore sorting plants and complete and modern change house. **Ore:** Lead-silver-zinc. **Men employed:** Average, 550, exclusive of leasers. **Remarks:** Replacement value of surface plant approximately \$1,000,000.

MACE GROUP

Property: 35 patented claims, Lelande dist.; Mace. **Development:** Principal development consists of No. 6 tunnel, 3600 ft. long; No. 2, Campbell, 3000 ft. long; and a three-compartment vertical shaft 2400 ft. deep, with 22 intermediate levels. Total development: Approximately 4 miles. **Plant:** MILL: Two 500-ton concentrators, including flotation. **Ore:** Lead-silver. **Remarks:** Except for the operation of a few leasers, who produced a small tonnage of ore, this property was idle.

BURKE GROUP

Property: One millsite, Lelande dist.; Burke. **Plant:** A small hydroelectric power plant.

FRISCO GROUP

Property: 15 patented claims, Lelande dist.; Gem. **Development:** Principally by four tunnels: No. 1, 1000 ft. long; No. 2, 1500 ft. long; No. 3, 550 ft. long; No. 4, 1000 ft. long; and a vertical four-compartment shaft, 1650 ft. deep. Total development, approximately 6 miles. **Ore:** Lead-zinc-silver. **Remarks:** A small tonnage of ore was produced by leasers during the year.

BIG CREEK GROUP

Property: 3 patented claims, Evolution dist.; Kellogg. **Development:** By one tunnel, 75 ft. long. **Ore:** Lead-zinc-silver.

GOVERNMENT GULCH GROUP

Property: Five-sixteenths interest in one patented claim, Yreka dist.; Kellogg. **Development:** Principally by one tunnel, which is 500 ft. long. Total development, approximately 1700 ft. **Ore:** Lead-silver.

PAGE GROUP

Property: 86 patented claims, Yreka dist.; Kellogg. **Development:** By 9 tunnels, the principal one of which is the Curlew, 650 ft. long, and an inclined shaft 600 ft. long, giving a vertical depth of 450 ft. Total development, approximately 8500 ft. **Ore:** Lead-zinc-silver.

CON BIEDERMAN GROUP

Property: One-half interest in 2 patented claims and one-third interest in 2 patented claims, Yreka dist.; Kellogg. **Development:** By two tunnels: No. 1, 320 ft. long; No. 2, 125 ft. long. **Ore:** Lead-zinc-silver.

REMARKS

This company is one of the largest operators in Shoshone County both in property owned and production, although for the past few years practically all of its production came from the Morning mine. This mine is one of the largest producers of lead-silver and zinc ores in the Coeur d'Alene district and capacity production was maintained throughout the year. During the closing months of the year work was started on rebuilding the Morning mill. When this work is completed it will mark one of the most advanced steps in ore-dressing practice that has been taken for many years.

FIRST NATIONAL SILVER MINES, LTD.

Office: 323 Lindelle Blk., Spokane, Wash. **Officers:** Dan Krehbiel, Pres., Lind, Wash.; Matt Baumgartner, Sec.-Mgr., Spokane, Wash. **Inc.:** April 7, 1920. **Capital:** 3,000,000 shares; par value 5c; 1,600,000 shares issued. **Property:** 7 patented, 26 unpatented claims, Evolution dist.; Kellogg. **Development:** By 2 tunnels: No. 1, 2600 ft. long; No. 2, 900 ft. long. **Ore:** Lead-silver, copper. **Remarks:** Assessment work only.

FISHHOOK MINING CO.

Office: 907 W. Jackson Ave., Spokane, Wash. **Officers:** Louis Olson, Pres.-Mgr.; Mrs. Louis Olson, Sec., both of Spokane, Wash. **Inc.:** Aug. 18, 1919. **Capital:** 1,000,000 shares; par value 10c; 185,000 shares issued. **Property:** Fishhook group; 5 unpatented claims, St. Joe dist.; Avery. **Development:** Principally by one tunnel, 200 ft. long. **Ore:** Gold-silver. **Men employed:** Average, 4.

FLORENCE MINING & MILLING CO., LTD.

Office: Kellogg. **Officers:** Charles Dallaire, Pres.; John B. Steffes, Sec., both of Kellogg. **Inc.:** Aug. 15, 1908. **Capital:** 1,000,000 shares; par value \$1; 440,000 shares issued. **Property:** Dallaire group; 10 unpatented claims; Big Creek, Yreka dist.; Kellogg. **Development:** 4 tunnels: No. 1, 300 ft. long; No. 2, 90 ft. long; No. 3, 50 ft. long; No. 4, 100 ft. long. **Ore:** Lead-silver. **Remarks:** Assessment work only. Four mill assessment levied Sept. 2, 1922.

FORMOSA LEAD MINING CO., LTD.

Office: 504 Empire State Bldg., Spokane, Wash. **Officers:** Charles Hussey, Sec., Spokane Wash. **Inc.:** Jan. 19, 1907. **Capital:** 1,500,000 shares; par value \$1; all shares issued. **Property:** 3 patented claims, Lelande dist.; Wallace. **Remarks:** Idle since 1907.

FRIEND MINING CO.

Office: 321 Lindelle Bldg., Spokane, Wash. **Officers:** T. F. Havens, Pres.; William Schierding, Sec.-Mgr., both of Spokane, Wash. **Inc.:** Aug. 18, 1915. **Capital:** 1,500,000 shares; par value 10c; 804,600 shares issued. **Property:** Friend group; 10 unpatented claims, Beaver dist.; Wallace. **Development:** Approximately 3000 ft. of workings. **Ore:** Lead-silver-zinc. **Men employed:** Average, 2. **Remarks:** One mill assessment levied Aug. 10, 1922.

GALENA MINING CO.

Office: Wallace. **Officers:** Donald A. Callahan, Pres.; Heleg A. McAllister, Sec., both of Wallace; C. W. Newton, Mgr., Interstate. **Inc.:** July 16, 1906 as Chicago-Boston Mining Co. Name changed Nov. 7, 1921. **Capital:** 2,500,000 shares; par value \$1; 2,386,000 shares issued. **Property:** Galena group; 7 patented, 17 unpatented claims; Evolution and Placer Center dists.; Wallace. **Development:** Principally by one tunnel 1500 ft. long and one vertical shaft 420 ft. deep with two intermediate levels. Total development, approximately 7500 ft. **Plant:** Electrically driven 500 cu. ft. I-R compressor; air driven Ottumwa hoist; complete mining equipment. **Ore:** Lead-silver. **Men employed:** Average, 6. **Remarks:** An extensive development campaign was maintained through the year. During the past two years a large tonnage of ore has been blocked out and fully demonstrated. Plans for a mill are being prepared and when this plant is erected a new dividend payer will be added to Shoshone County. This company lost its identity during the year, being absorbed by the Callahan Zinc-Lead Co.

GERTIE MINING CO.

Office: 708 Hutton Bldg., Spokane, Wash. **Officers:** L. W. Hutton, Pres.; C. A. Gonser, Sec.; A. A. Booth, Mgr., all of Spokane, Wash. **Inc.:** July 23, 1914. **Capital:** 2,500,000 shares; par value 10c; 2,430,000 shares issued. **Property:** Gertie group; 3 patented claims, Lelande dist.; Burke. **Development:** Principally by one tunnel, which is over one mile in length. **Remarks:** Idle since 1918.

GIANT LEDGE MINING CO.

Office: 617 Peyton Bldg., Spokane, Wash. **Officers:** John H. Taylor, Pres.; W. W. Johnston, Sec., both of Spokane, Wash.; Charles G. Taylor, Mgr., Murray. **Inc.:** Feb. 2, 1914. **Capital:** 1,500,000 shares; par value \$1; 1,307,929 shares issued. **Property:** 65 unpatented claims, Summit dist.; Murray. **Development:** Principally by one vertical shaft 400 ft. deep, with about 2200 ft. of tunnels and crosscuts. **Plant:** Electrically driven hoist, and 700 cu. ft. I-R compressor; complete mining equipment and camp. **Ore:** Lead-copper-silver-gold. **Men employed:** Average, 2. **Remarks:** Small amount of development work throughout the year.

GIANT MINING & DEVELOPMENT CO.

Office: Wallace. **Officers:** Paul Liver, Pres.-Mgr.; E. R. Turk, Sec., both of Wallace. **Inc.:** Sept. 22, 1899. **Capital:** 1,000,000 shares; par value 10c; 539,778 shares issued. **Property:** 8 unpatented claims, Beaver dist.; Wallace. **Development:** Approximately 2000 ft. of workings. **Ore:** Lead-silver. **Remarks:** Five mill assessment levied Aug. 19, 1922.

GOLD COIN MINING CO.

Office: Wallace. **Officers:** C. A. Solberg, Vice Pres.; Morton Webster, Sec., both of Wallace; H. E. Rogers, Mgr., Saltese, Mont. **Inc.:** April 23, 1915. **Capital:** 1,500,000 shares; par value 25c; all shares issued. **Property:** 5 unpatented claims, St. Joe dist.; Saltese, Mont. **Remarks:** Assessment work only.

GOOD HUNTER MINING & SMELTING CO.

Office: 516 E. 28th St., Chicago, Ill. **Officers:** Edwin C. Hennessy, Pres.; Thomas F. Keeley, Sec., both of Chicago, Ill.; C. L. Herrick, Mgr., Mullan. **Inc.:** March 20, 1893. **Capital:** 200,000 shares; par value \$10; all shares issued. **Property:** Gold Hunter: 12 patented claims, Hunter dist.; Mullan. **Development:** Principal main haulage tunnel 4800 ft. long from which level is a shaft 1500 ft. deep. **Plant:** MINE: Complete and modern; electric hoist; two 3000 cu. ft. electrically driven compressors; pumps; machine and blacksmith shop; electric haulage. **MILL:** 400 ton concentrator, including flotation. **Ore:** Lead-silver. **Men employed:** Average, 65; 50 of which were leasers. **Remarks:** Other than the operations of the leasers this mine was closed down throughout the year. The mill was run intermittently in treating ore produced by the leasers.

GOODENOUGH MINING CO.

Office: Wallace. **Officers:** J. Fred Markwell, Sec., Wallace. **Inc.:** April 6, 1922. **Capital:** 2,500,000 shares; par value 1c; shares issued, none.

GOVERNMENT GULCH MINING CO.

Office: Wallace. **Officers:** Frederick Burbidge, Pres.-Mgr.; A. W. Hoover, Sec., both of Wallace. **Inc.:** June 15 1918. **Capital:** 1,500,000 shares; par value 10c; 1,350,567 shares issued. **Property:** Government Gulch group; 6 patented claims, Yreka dist.; Kellogg. **Development:** Principally by one tunnel 500 ft. long and a vertical shaft 100 ft. deep. Total development, approximately 1800 ft. **Ore:** Lead-zinc-silver. **Remarks:** Idle.

GREAT EASTERN MINING CO., LTD.

Office: Wallace. **Officers:** John Carlson, Pres., Gem; John C. Furst, Sec., Wallace. **Inc.:** Oct. 22, 1900. **Capital:** 1,000,000 shares; par value \$1; 750,000 shares issued. **Property:** Great Eastern group; 12 patented claims, Lelande dist.; Gem. **Development:** Total development, approximately 4000 ft., the principal tunnel of which is 600 ft. long. **Ore:** Lead-silver.

GREAT HELENA MINING & MILLING CO.

Office: Kellogg. **Officers:** Philip J. Lynch, Pres.; Thomas C. Lynch, Sec.-Mgr., both of Kellogg. **Inc.:** Aug. 24, 1922. **Capital:** 1,500,000 shares; par value 20c; 1500 shares issued. **Property:** Helena group; 7 unpatented claims; Pine Creek, Yreka dist.; Kellogg. **Development:** Approximately 900 ft. of tunnels. **Ore:** Lead-zinc-silver.

GREEN HILL CLEVELAND MINING CO.

Office: Wallace. **Officers:** F. H. Brownell, Pres., 120 Broadway, New York City; Frederick Burbidge, Mgr., Wallace. **Inc.:** Oct. 7, 1912. **Capital:** 320,000 shares; par value \$1; all shares issued. **Property:** Green Hill group; 3 patented claims, Lelande dist.; Mace. **Remarks:** Idle since 1917.

GUELPH MINING & MILLING CO., LTD.

Office: Kellogg. **Officers:** B. Coyle, Pres., Walla Walla, Wash.; A. B. Corby, Sec., Kellogg. **Inc.:** March 27, 1906. **Capital:** 1,500,000 shares; par value \$1; 1,200,000 shares issued. **Property:** Guelph group; 5 patented, 5 unpatented claims, Placer Center dist.; Wallace. **Development:** Principally by 3 tunnels: No. 1, 150 ft. long; No. 2, 850 ft. long; No. 3, 650 ft. long and a vertical shaft 250 ft. deep. **Plant:** 5-drill, 2 stage Sullivan compressor driven by a 75 h. p. electric motor; air driven hoist; complete mining equipment and camp. **Ore:** Lead-silver.

HARTFORD MINING CO., LTD.

Office: Wallace. **Officers:** William F. Goddard, Pres.-Mgr.; Therrett Towles, Sec., both of Wallace. **Inc.:** Feb. 24, 1908. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** Hartford group; 5 unpatented claims at mouth of Big Creek, Yreka dist.; Kellogg. **Development:** By 2 tunnels: No. 1, 500 ft. long; No. 2, 100 ft. long. **Ore:** Lead-silver.

HAYES CO.

Office: Kellogg. **Officers:** Arthur Hayes, Pres.; Martin Nicholson, Sec.; Stanly A. Easton, Mgr., all of Kellogg. **Inc.:** May 11, 1916. **Capital:** 25,000 shares; par value \$1; 12,500 shares issued. **Property:** 1200 acres river bottom land held under lease; Yreka dist.; Kellogg. **Plant:** MILL: 100 ton flotation concentrator; Orange peel dredge and sand pumps. **Ore:** Lead-silver from river tailings. **Men employed:** Average, 13. **Remarks:** Profitably operated throughout the year.

HEADLIGHT MINING CO., LTD.

Office: Wallace. **Officers:** Frank P. Markwell, Pres., Los Angeles, Calif.; Everett H. Pattison, Sec., Long Beach, Calif.; Alexander Murphy, Mgr., Wallace. **Inc.:** May 9, 1900. **Capital:** 1,800,000 shares; par value \$1; all shares issued. **Property:** Headlight group; 12 patented, 2 unpatented claims, Lelande dist.; Black Bear.

HECLA MINING CO.

Office: Wallace. **Officers:** James F. McCarthy, Pres.-Mgr., Wallace. **Inc.:** Sept. 26, 1898. **Capital:** 1,000,000 shares; par value 25c; all shares issued. **Property:** 43 patented, 1 unpatented claims, Lelande dist.; Burke. **Development:** Principally by a four-compartment vertical shaft, which is 2000 ft. deep. Total development, approximately 7 miles. **Plant:** MINE: One of the most complete in the state. MILL: 700-ton concentrator, including flotation. **Ore:** Lead-silver. **Men employed:** Average, 470. **Remarks:** The development work on the lower levels of the mine during the year proved the ore bodies to be larger and more extensive than in any other part of the mine. This work and the developments on the Wide West claim have greatly increased the ore reserves and assure this property a future life of many years. This mine is one of the most consistent dividend payers of the district; is completely and modernly equipped and economically and intelligently managed; and the management is to be complimented upon the spirit of cooperation that it has engendered in the employees.

HELVETIA MINING CO.

Office: Wallace. **Officers:** Paul Liver, Pres.; Thomas Nicholson, Sec.-Mgr., both of Wallace. **Inc.:** March 8, 1907. **Capital:** 1,000,000 shares; par value \$1; 619,855 shares issued. **Property:** Helvetia group; 5 unpatented claims, Placer Center dist.; Wallace. **Development:** By one tunnel 240 ft. long. **Ore:** Lead-silver. **Remarks:** Small amount of development work during the year.

HENRIETTA EXPLORATION CO.

Office: Kellogg. **Officers:** C. W. Simmons, Pres., Kellogg; H. J. Hull, Sec., Wallace. **Inc.:** Aug. 11, 1917. **Capital:** 5000 shares; par value \$10; 1865 shares issued. **Remarks:** Owns or controls no mining property in Idaho.

HERCULES MINING CO.

Office: Burke. **Officers:** Jerome J. Day, Mgr., Wallace. **Inc.:** Partnership
Property: Hercules; 38 patented claims, Lelande and Placer Center dists.;
 Burke. **Development:** Principally by 5 tunnels: No. 1, 280 ft. long; No. 2,
 3350 ft. long; No. 3, 3900 ft. long; No. 4, 5900 ft. long; No. 5, 8550 ft. long;
 and a four-compartment vertical shaft 1300 ft. deep with 8 intermediate
 levels. Total development, approximately 17 miles. **Plant:** MINE: Special
 first motion, double reel, Nordberg electric hoist, direct connected to 700 h. p.
 motor. One 22x16 I-R and one 29x21 I-R compressors, both electrically
 driven. Electric trolley locomotive in main transportation tunnel and
 storage battery locomotives in intermediate levels. Complete and modern
 mine equipment and shops. **MILL:** 600-ton concentrator, including flota-
 tion. **Ore:** Lead-silver. **Men employed:** Average, 350, since resuming
 operation, prior to which 60 men were employed. **Remarks:** This property
 which has been in idleness for approximately two years resumed operations
 during 1922 and in the closing months of the year was operating with a full
 force of men and maintaining capacity production. Control of this mine is
 held by the Day family and the property is known throughout the world
 as a famous lead producing mine and as one of the bonanzas of the Coeur
 d'Alene district.

HIDDEN TREASURE MINING CO.

Office: Wallace. **Officers:** Frederick Burbidge, Pres.-Mgr.; A. W. Hoover,
 Sec., both of Wallace. **Inc.:** May 18, 1908. **Capital:** 500,000 shares; par value
 \$10; all shares issued. **Property:** Hidden Treasure group; 4 patented claims,
 Lelande dist.; Burke. **Development:** Principally by one tunnel, 2540 ft.
 long.

HIGHLAND-SURPRISE CONSOLIDATED MINING CO.

Office: Kellogg. **Officers:** Dr. Charles R. Mowery Pres., Wallace; George D.
 Lamielle, Sec.; M. J. Sinclair, Mgr., both of Kellogg. **Inc.:** Aug. 27, 1912.
Capital: 1,200,000 shares; par value \$1; 1,192,947 shares issued. **Property:**
 3 patented, 27 unpatented claims; Pine Creek, Yreka dist.; Kellogg. **De-**
velopment: Approximately 2 miles of underground workings. **Plant:** MINE:
 A 7-drill I-R compressor, electrically driven; complete mining equipment and
 camp. **MILL:** 100-ton concentrator. **Ore:** Lead-zinc-silver. **Men employed:**
 5 leasers. **Remarks:** The upper workings of the mine were operated by
 leasers throughout the year.

HILL MINING & MILLING CO.

Office: Kellogg. **Officers:** Josiah Hill, Pres.; Lester S. Harrison, Sec. **Inc.:**
 May 10, 1916. **Capital:** 1,000,000 shares; par value 10c; 500,000 shares issued.
Property: 4 claims, Yreka dist.; Kellogg. **Remarks:** A projected crosscut
 to expose the vein at a greater depth was driven by the president of the com-
 pany during the year.

HONOLULU MINING CO., LTD.

Office: Wallace. **Officers:** J. W. Tabor, Pres.-Mgr., Wallace; John Mahoney,
 Sec., 1418 W. Riverside Ave., Spokane, Wash. **Inc.:** April 4, 1916. **Capital:**
 1,000,000 shares; par value \$1; 620,000 shares issued. **Property:** 4 unpatented
 claims, Lelande dist.; Burke. **Development:** By 2 tunnels: No. 1, 550 ft.
 long; No. 2, 600 ft. long. **Ore:** Lead-silver. **Remarks:** A small amount of
 development work during the year.

HORNSILVER MINING & MILLING CO., LTD.

Office: Wallace. **Officers:** John F. Mitz, Pres., Saltese, Mont.; O. R. Young, Sec., Wallace. **Inc.:** May 31, 1901. **Capital:** 1,000,000 shares; par value 10c; shares issued unknown. **Property:** 2 claims, Placer Center dist.; Wallace.

HORSE SHOE MINING CO.

Office: Mullan. **Officers:** J. B. Scoles, Pres.-Mgr.; Lawrence Hollywood, Sec., both of Mullan. **Inc.:** July 16, 1908. **Capital:** 1,500,000 shares; par value \$1; 850,000 shares issued. **Property:** Horse Shoe group; 9 unpatented claims, Hunter dist.; Mullan. **Development:** One tunnel, 400 ft. long, and one, 1100 ft. long. **Ore:** Copper-silver. **Remarks:** A small amount of development work during the year. One cent assessment levied March 22, 1922.

HUMMINGBIRD MINING CO.

Office: Burke. **Officers:** Jerome J. Day, Pres.-Mgr.; W. H. Hoover, Sec., Burke. **Inc.:** Jan. 27, 1898. **Capital:** 1,500,000 shares; par value \$1; all shares issued. **Property:** Hummingbird group; 18 patented claims, Lelanda dist.; Burke. **Development:** Total development approximately 6000 ft. of tunnels, the principal of which are No. 4, 1030 ft. long, and No. 5, 2200 ft. long. **Plant:** All equipment used in operation furnished by Hercules Mining Co. **Ore:** Lead-silver. **Men employed:** Average 7. **Remarks:** A large amount of prospecting work was done during the year. One and one-half cent assessment levied April 7, 1922.

HYPOTHEEK MINING & MILLING CO.

Office: Wallace. **Officers:** Walter H. Hanson, Pres.; Otto A. Olsson, Sec.-Mgr., both of Wallace. **Inc.:** Feb. 13, 1901. **Capital:** 2,000,000 shares; par value 10c; all shares issued. **Property:** 640 acres of patented land, Yreka dist.; Kellogg. **Development:** By 2 tunnels: No. 1, 700 ft. long; No. 2, 400 ft. long; and a vertical shaft 1100 ft. deep. Total development approximately 7400 ft. **Plant:** MINE: Double drum electric hoist; No. 10 I-R compressor, electrically driven; machine shop; sawmill; and complete mining equipment; 12 buildings. MILL: 200-ton concentrator, partly dismantled. **Ore:** Lead-zinc-silver. **Men employed:** Average, 4. **Remarks:** Considerable development work during the year. Five mill assessment levied Oct. 13, 1922.

IDAHO COPPER MINING CO., LTD.

Office: Wallace. **Officers:** A. H. Featherstone, Sec., Wallace. **Inc.:** Aug. 24, 1906. **Capital:** 1,250,000 shares; par value \$1; all shares issued. **Property:** 3 patented claims, Hunter dist.; Mullan. **Remarks:** Idle for a number of years.

IDAHO GIANT MINING CO.

Office: 922 Old National Bank Bldg., Spokane, Wash. **Officers:** Leo Greenough, Vice Pres.; W. J. Beaton, Sec., both of Spokane, Wash. **Remarks:** Owns or controls no mining property in Idaho.

IDAHO-LEADVILLE MINES CO.

Office: 823 First Ave., Spokane, Wash. **Officers:** Thomas Fahey, Pres.; E. P. Ryan, Sec., both of Spokane, Wash. **Inc.:** April 1, 1914. **Capital:** 1,000,000 shares; par value 10c; 568,415 shares issued. **Property:** 12 unpatented claims, Evolution dist.; Osburn. **Development:** By 2 tunnels: No. 1, 900 ft. long; No. 2, 60 ft. long. **Ore:** Lead-silver. **Men employed:** Average, 2. **Remarks:** A new road to the mine was completed and a small amount of development work was done during the year.

IDAHO & LOS ANGELES MINING & MILLING CO.

Office: Wallace. **Officers:** John W. Flink, Pres., Albuquerque, N. Mex.; Alfred J. Dunn, Sec.-Mgr., Wallace. **Inc.:** June 6, 1904; charter forfeited Dec. 2, 1916. **Capital:** 1,000,000 shares; par value \$1; 820,000 shares issued. **Property:** 7 patented, 9 unpatented claims, Placer Center dist.; Wallace. **Development:** By 3 tunnels: No. 1, 150 ft. long; No. 2, 2000 ft. long; No. 3, 700 ft. long. **Ore:** Lead-zinc-silver. **Remarks:** Assessment work only. Two mill assessment levied May 1, 1922.

IDAHO MINES LEASING CO.

Officers: L. L. Sweet, Pres.; William J. Stratton, Sec., both of Wallace. **Inc.:** July 17, 1920; charter forfeited Dec. 1, 1922. **Capital:** 50,000 shares; par value \$1; 24,000 shares issued. **Property:** Lease on part of the Frisco group which is owned by the Federal Mining & Smelting Co. An assessment of 10 cents was levied July 29, 1922.

IDAHO NORTHERN MINERAL CO.

Officers: J. A. Sandgren, Pres., Spokane, Wash.; Walter Kiester, Sec., Murray; O. M. Nordquist, Mgr., Wallace. **Inc.:** Feb. 26, 1910. **Capital:** 1,500,000 shares; par value \$1; 1,182,450 shares issued. **Property:** Idaho Northern group; 18 unpatented claims, Summit dist.; Murray. **Development:** By 3 tunnels: No. 1, 2000 ft. long; No. 2, 165 ft. long; No. 3, 460 ft. long. **Ore:** Lead-silver. **Remarks:** Assessment work only.

IDORA MINING CO., LTD.

Office: Jamieson Blk, Spokane, Wash. **Officers:** James C. Board, Pres.; C. E. Mallett, Sec.-Mgr., both of Spokane, Wash. **Inc.:** April 23, 1915. **Capital:** 1,500,000 shares; par value 10c; 694,220 shares issued. **Property:** Idora group; 1 patented, 8 unpatented claims, Beaver Creek dist.; Carbonate. **Plant:** MINE: 1 electrically driven compressor. MILL: 100-ton concentrator. **Ore:** Lead-zinc-silver. **Remarks:** Idle since 1917. An assessment of two and one-half mills levied Feb. 11, 1922.

IMPERIAL MINING CO.

Office: Wallace. **Officers:** William Becker, Pres.; Henry G. Brown, Sec.-Mgr., both of Wallace. **Inc.:** Nov. 21, 1906. **Capital:** 1,500,000 shares; par value \$1; 1,239,756 shares issued. **Property:** Imperial group; 8 patented claims, Lelande dist.; Burke. **Development:** Principally by 3 tunnels: No. 1, 200 ft. long; No. 2, 1500 ft. long; No. 3, 3640 ft. long. Total development, approximately 7900 ft. **Plant:** Electrically driven 4 drill I-R compressor; complete mining equipment and camp. **Ore:** Lead-silver. **Men employed:** Average, 3. **Remarks:** This company was actively engaged in extending its lower tunnel throughout the year. Last assessment, two and one-half mills levied Aug. 26, 1922.

INDEPENDENCE LEAD MINES, LTD.

Officers: H. B. Kingsbury, Pres., Mullan; W. E. Cullen, Jr., Sec., Spokane, Wash. **Inc.:** Nov. 30, 1914, as New Independent Mining Co.; name changed Aug. 23, 1915. **Capital:** 1,500,000 shares; par value \$1; all shares issued. **Property:** Gettysburg group; 10 patented claims, Hunter dist.; Mullan. **Development:** Principally by 5 tunnels; No. 1, 100 ft. long; No. 2, 300 ft. long; No. 3, 1000 ft. long; No. 4, 3000 ft. long; Independence, 300 ft. long. **Plant:** Complete mining equipment. Power furnished by American Commander M. & M. Co. **Ore:** Lead-silver. **Men employed:** Average, 7. **Remarks:** Extensive development campaign in upper tunnel throughout the year; later transferred to No. 4 tunnel, and a raise started to No. 3. Considerable ore has been exposed.

INDEPENDENT COPPER MINING & MILLING CO., LTD.

Office: Wallace. **Officers:** John H. Nordquist, Pres.-Mgr.; Otto A. Olsson, Sec., both of Wallace. **Inc.:** March 4, 1905. **Capital:** 1,250,000 shares; par value \$1; all shares issued. **Property:** 3 patented claims, Hunter dist.; Mullan. **Development:** Approximately 2300 ft. of workings. **Ore:** Copper, lead-silver.

INLAND EMPIRE MINING & MILLING CO.

Office: 310 Ziegler Bldg., Spokane, Wash. **Officers:** A. C. Schumer, Pres.-Mgr., Hibbing, Minn.; John H. Roche, Sec., Spokane, Wash. **Inc.:** June 18, 1910. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** Never Sweat; one patented claim, Lelande dist.; Burke. **Development:** By 2 tunnels: No. 1, 350 ft. long; No. 2, 400 ft. long; and an inclined shaft 250 ft. deep. **Ore:** Lead-silver. **Remarks:** A new electrically driven hoist and compressor and complete mining equipment were installed, the shaft pumped out and development work started.

INTERNATIONAL MINES, LTD.

Office: Wallace. **Officers:** James White, Pres.; A. H. Featherstone, Sec., both of Wallace. **Inc.:** July 2, 1903. **Capital:** 1,500,000 shares; par value \$1; 1,400,000 shares issued. **Property:** 11 patented claims, Lelande dist.; Wallace. **Remarks:** Idle for 5 years.

INTERNATIONAL MINING CO.

Office: Kellogg. **Officers:** Charles May, Pres., Minneapolis, Minn.; W. F. Robertson, Sec., Rollette, N. Dak.; Fred May, Mgr., Kellogg. **Inc.:** July 8, 1912. **Capital:** 1,000,000 shares; par value \$1; 727,468 shares issued. **Property:** International group; 15 unpatented claims; Pine Creek, Yreka dist.; Kellogg. **Development:** Principally by 2 tunnels: No. 1, 1500 ft. long; No. 2, 150 ft. long. **Plant:** Gas driven 6x6 compressor; complete mining equipment and small camp. **Ore:** Lead-silver. **Remarks:** Small amount of development done under contract during the year.

IRON KING MINING CO., LTD.

Office: Wallace. **Officers:** Herman J. Rossi, Pres.; Otto A. Olsson, Sec., both of Wallace. **Inc.:** Jan. 8, 1904. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** Iron King group; 4 unpatented claims, Placer Center dist.; Wallace. **Development:** Principally by 2 tunnels: No. 1, 400 ft. long; No. 2, 150 ft. long. **Ore:** Lead-silver. **Remarks:** Operated by two leasers throughout the year.

IRON SPAR COPPER MINING CO.

Office: Wallace. **Officers:** Wesley Everett, Pres.; G. W. Dougherty, Sec.; H. L. Honeker, Mgr., all of Wallace. **Inc.:** May 18, 1904. **Capital:** 1,000,000 shares; par value \$1; 586,258 shares issued. **Property:** 4 unpatented claims, Hunter dist.; Mullan. **Development:** One tunnel 800 ft. long. **Remarks:** Assessment work only.

IVANHOE MINING CO., LTD.

Office: Mullan. **Officers:** J. A. Bean, Pres., 1089 Lighton Ave., Los Angeles, Calif.; C. D. Miller, Sec., Mullan. **Inc.:** Oct. 18, 1906. **Capital:** 1,500,000 shares; par value \$1; 1,494,952 shares issued. **Property:** 2 patented claims, Hunter dist.; Mullan.

JACK WAITE MINING CO., LTD.

Office: Spokane, Wash., Box 2173. **Officers:** E. Winsby, Pres., Oakland, Calif.; C. E. Chamberlain, Sec., Spokane, Wash. **Inc.:** Nov. 22, 1909. **Capital:** 1,500,000 shares; par value \$1; 1,400,000 shares issued. **Property:** Jack Waite; 3 patented, 5 unpatented claims, Eagle dist.; Murray. **Development:** Principally by 2 tunnels: No. 1, 2400 ft. long; No. 2, 1600 ft. long. Total development approximately 4800 ft. **Plant:** Steam driven compressor; complete mining equipment and camp. **Ore:** Lead-zinc-silver.

JIM BLAINE SILVER SYNDICATE, LTD.

Office: 323 Lindelle Blk., Spokane, Wash. **Officers:** Dan Krehbiel, Pres., Lind, Wash.; Matt Baumgartner, Sec., Spokane, Wash. **Inc.:** April 12 1920. **Capital:** 2,000,000 shares; par value 5c; 1,492,000 shares issued. **Property:** Jim Blaine group; 25 unpatented claims; Pine Creek, Yreka dist.; Kellogg. **Development:** By 3 tunnels: No. 1, 500 ft. long; No. 2, 450 ft. long. **Plant:** Compressor and complete mining equipment. **Ore:** Lead-zinc-silver. **Men employed:** Average, 4. **Remarks:** One of the active operators on Pine Creek; continuous work for two years in extending No. 3 tunnel, which will open the vein at a vertical depth of over 400 ft.

KELLOGG GALENA MINING CO.

Office: 832 Old National Bank Bldg., Spokane, Wash. **Officers:** C. C. McEachran, Pres.; Samuel A. McCoy, Vice Pres.-Mgr., both of Spokane, Wash. **Inc.:** Sept. 30, 1915; charter forfeited Dec. 1, 1920. **Capital:** 1,500,000 shares; par value 10c; 1,300,000 shares issued. **Property:** 14 unpatented claims, Yreka dist.; Kellogg. **Development:** About 1400 ft. of workings. **Ore:** Lead-silver. **Remarks:** Assessment work only.

KELLOGG UNITED MINES CO.

Office: 1322 Old National Bank Bldg., Spokane, Wash. **Officers:** J. A. McEachran, Pres.-Mgr., Kellogg; J. C. McEachran, Sec., Spokane, Wash. **Inc.:** Dec. 26, 1916. **Capital:** 2,000,000 shares; par value 25c; all shares issued. **Property:** Lease on Great Western group; 42 claims, owned by Federal M. & S. Co.; Yreka dist.; Kellogg. **Plant:** Partly constructed mill.

KING OF PINE CREEK MINING CO.

Office: Wallace. **Officers:** James H. Otto, Pres., Kellogg; Ed C. Young, Sec.-Mgr., Wallace. **Inc.:** Aug. 10, 1904. **Capital:** 1,500,000 shares; par value \$1; 767,012 shares issued. **Property:** 4 unpatented claims; Pine Creek, Yreka dist.; Kellogg. **Development:** Principally by 3 tunnels: No. 1, 320 ft. long; No. 2, 300 ft. long; No. 3, 100 ft. long. **Ore:** Lead-zinc-silver. **Remarks:** A small amount of work done under contract during the year. Assessment of one mill levied April 22, 1922.

LEAD BLOSSOM MINING & MILLING CO.

Office: Mullan. **Officers:** Mike Murray, Pres.; D. E. Keys, Sec.-Mgr., both of Mullan. **Inc.:** June 5, 1922, as Iron Blossom Mining & Milling Co.; name changed November 2, 1922. **Capital:** 1,500,000 shares; par value 25c; 600,000 shares issued. **Property:** Iron Blossom group; 3 patented, 7 unpatented claims, Yreka dist.; Wardner. **Development:** By 2 tunnels: No. 1, 75 ft. long; No. 2, 300 ft. long; and an inclined shaft 300 ft. long. **Plant:** Air driven hoist; electrically driven I-R 12x10 compressor; and complete mining equipment. **Ore:** Lead-silver. **Men employed:** Average, 7. **Remarks:** Equipment installed and systematic development work started in the month of June. The shaft was sunk to 300 ft. in depth and crosscutting to the vein started. This is one of the principal prospecting activities to start during the year.

LEAD CRYSTALS MINING CO., LTD.

Office: Wallace. **Officers:** John E. Steen, Pres.-Mgr.; G. W. Dougherty, Sec., Wallace. **Inc.:** Dec. 11, 1911. **Capital:** 1,500,000 shares; par value \$1; 1,494,000 shares issued. **Property:** 10 unpatented claims, Eagle dist.; Prichard. **Development:** By 3 tunnels: No. 1, 250 ft. long; No. 2, 1100 ft. long; No. 3, 560 ft. long. **Ore:** Lead-silver. **Remarks:** During the year this company constructed a road to its property, but an early winter prevented shipping the ore that had been mined. Extensive development work progressed throughout the year.

LEGAL TENDER MINING CO., LTD.

Office: Wallace. **Officers:** George H. Heller, Pres.-Mgr., Kellogg; A. H. Featherstone, Sec., Wallace. **Inc.:** Aug. 22, 1904. **Capital:** 1,500,000 shares; par value \$1; all shares issued. **Property:** Legal Tender group; 17 unpatented claims, Evolution dist.; Osburn. **Ore:** Lead-silver. **Remarks:** Assessment work only for a number of years.

LEROY GOLD & COPPER MINING CO., LTD.

Office: Wallace. **Officers:** G. F. Damm, Pres.; C. E. Clarke, Sec.-Mgr., both of Wallace. **Inc.:** Aug. 2, 1897. **Capital:** 1,000,000 shares; par value \$1; 320,031 shares issued. **Property:** LeRoy group; 5 patented claims, unorganized dist.; Adair.

LIQUIDATOR MINING CO.

Office: Wallace. **Officers:** L. E. Hanley, Sec.-Mgr., Wallace. **Inc.:** Sept. 21, 1908. **Capital:** 1,000,000 shares; par value \$1; 856,764 shares issued. **Property:** East Hecla group; 13 patented claims, Hunter and Lelande dists.; Wallace. **Development:** One tunnel 930 ft. long.

LITTLE BUTTE MINING CO.

Office: Wallace. **Officers:** Mark Cyr, Pres., Burke; Herman J. Rossi, Sec., Wallace. **Inc.:** Sept. 14, 1906. **Capital:** 1,500,000 shares; par value \$1; shares issued, unknown. **Property:** Little Butte group; 28 unpatented claims, Lelande dist.; Burke. **Ore:** Lead-silver. **Remarks:** Assessment work only.

LOG CABIN MINING & MILLING CO., LTD.

Office: Wallace. **Officers:** S. H. Linn, Pres.-Mgr., Kingston; Otto A. Olsson, Sec., Wallace. **Inc.:** Nov. 21, 1906. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** Log Cabin group; 16 unpatented claims, Placer Center dist.; Wallace. **Development:** Principally by 3 tunnels: No. 1, 50 ft. long; No. 2, 1000 ft. long; No. 3, 500 ft. long. **Ore:** Lead-silver. **Men employed:** Average, 3. **Remarks:** A small amount of development work during the year. This company has been consolidated with the Nine Mile Mining Co.

LOMBARDY MINING & MILLING CO.

Office: Kellogg. **Officers:** Peter Albinola, Pres., Kellogg; Herman J. Rossi, Sec., Wallace. **Inc.:** March 17, 1899. **Capital:** 1,500,000 shares; par value 10c; all shares issued. **Property:** Lombardy group; 15 patented claims, Yreka dist.; Kellogg. **Development:** By 3 tunnels: and one shaft. **Plant:** Hoist, compressor and complete mining equipment. **Ore:** Lead-silver.

LOOKOUT MOUNTAIN MINING & MILLING CO.

Office: Kellogg. **Officers:** R. L. Brainard, Pres.; W. L. Penney, Sec.-Mgr., both of Kellogg. **Inc.:** June 2, 1916. **Capital:** 2,000,000 shares; par value 25c; 1,450,000 shares issued. **Property:** Lookout Mountain group; 19 unpatented claims, Yreka dist.; Kellogg. **Development:** Principally by 3 tunnels: No. 1, 75 ft. long; No. 2, 600 ft. long; No. 3, 110 ft. long; and a vertical shaft in No. 2 tunnel 85 ft. deep. **Plant:** Air driven hoist; 8x8 Sullivan compressor, gas driven; complete mining equipment and camp; 2200 ft. tramway. **Ore:** Lead-silver. **Men employed:** Average, 4. **Remarks:** This company was actively engaged throughout the year in developing its property, which has excellent possibilities. This work has proven that deeper development is justifiable and present plans contemplate the driving of a lower tunnel, which will open the vein at a greater depth. The company made its initial shipment during 1922.

LUCKY BOB MINING CO.

Office: 614 Hyde Bldg., Spokane, Wash. **Officers:** Charles H. Bell, Pres.; Charles A. Gram, Sec., both of Spokane, Wash. **Inc.:** July 17, 1914; charter forfeited Dec. 1, 1922. **Capital:** 1,500,000 shares; par value \$1; 1,200,000 issued. **Property:** Record group; 5 unpatented claims, Evolution dist.; Wallace. **Development:** Principally by one tunnel 500 ft. long. **Ore:** Lead-silver.

LUCKY BOY MINING & CONCENTRATING CO., LTD.

Office: Mullan. **Officers:** M. D. Needham, Pres.-Mgr.; Agnes Needham, Sec., both of Mullan. **Inc.:** Jan. 12, 1907. **Capital:** 1,000,000 shares; par value \$1; 416,000 shares issued. **Property:** Lucky Boy group; 17 unpatented claims, Hunter dist.; Mullan. **Development:** By 6 tunnels: No. 1, 35 ft. long; No. 2, 110 ft. long; No. 3, 245 ft. long; No. 4, 1750 ft. long; No. 5, 1300 ft. long; No. 6, 500 ft. long. Total development, approximately 4200 ft. **Ore:** Lead-silver. **Remarks:** Assessment work only.

LUCKY CALUMET COPPER MINING CO., LTD.

Office: Wallace. **Officers:** John H. Nordquist, Pres.-Mgr.; Otto A. Olsson, Sec., both of Wallace. **Inc.:** Oct. 9, 1906. **Capital:** 1,500,000 shares; par value \$1; all shares issued. **Property:** Lucky Calumet group; 9 unpatented claims, Hunter dist.; Mullan. **Development:** Principally by 2 tunnels: No. 1, 600 ft. long; No. 2, 1100 ft. long. Total development, approximately 5000 ft. **Plant:** Electrically driven 5-drill I-R two-stage compressor; complete mining equipment and camp. **Ore:** Copper-silver.

LUCKY STONE MINING CO.

Office: Empire State Bldg., Spokane, Wash. **Officers:** Dr. Peter Reid, Pres.; George H. Walters, Sec., both of Spokane, Wash. **Inc.:** June 8, 1921. **Capital:** 1,000,000 shares; par value \$1; 907,350 shares issued. **Property:** Lucky Stone group; 20 unpatented claims, Evolution dist.; Wallace. **Development:** Numerous crosscuts and tunnels, totaling approximately 2000 ft. **Ore:** Lead-silver. **Men employed:** Average, 3. **Remarks:** A small amount of development work throughout the year.

MAC D'PALM MINING CO.

Office: Kellogg. **Officers:** W. G. Palmer, Pres.; E. B. Palmer, Sec., both of Kellogg. **Inc.:** June 3, 1922. **Capital:** 1,000,000 shares; par value 10c; shares issued, unknown. **Property:** Silver State group; 5 unpatented claims, Evolution dist.; Kellogg. **Development:** One tunnel 200 ft. long. **Ore:** Lead-silver.

MACEDONIA MINING CO.

Office: Wallace. **Officers:** A. M. Mondell Pres.-Mgr.; C. A. Keating, Sec., both of Wallace. **Inc.:** Oct. 8, 1921. **Capital:** 1,500,000 shares; par value 10c; 791,000 shares issued. **Property:** Macedonia group; 23 unpatented claims, at the head of West Fork of Slate Creek; St. Joe dist.; Wallace.

MAINE-STANDARD MINING CO., LTD.

Office. Wallace. **Officers:** Alexander Murphy, Pres., Wallace; Everett H. Pattison, Sec., Long Beach, Calif. **Inc.:** March 4, 1907. **Capital:** 1,500,000 shares; par value \$1; all shares issued. **Property:** Maine Standard group; 5 unpatented claims, Lelande dist.; Black Bear. **Ore:** Lead-silver. **Remarks:** Assessment work only.

MAJESTIC MINING CO., LTD.

Office: Wallace. **Officers:** James Dunne, Pres.-Mgr.; Burke; Therrett Towles, Sec., Wallace. **Inc.:** Aug. 23, 1904. **Capital:** 1,500,000 shares; par value 25c; 1,000,000 shares issued. **Property:** Majestic group; 13 patented claims, Lelande and Summit dists.; Burke. **Development:** Principally by one tunnel 1500 ft. long. **Ore:** Lead-silver. **Men employed:** Average, 2. **Remarks:** A small amount of development work during the year.

MARSH MINES CONSOLIDATED

Office: Spokane, Wash., Box 1620. **Officers:** Edward Pohlman, Pres.; Jos. McCarthy, Sec.; F. Cushing Moore, Mgr., all of Spokane, Wash. **Inc.:** Aug. 17, 1916. **Capital:** 2,000,000 shares; par value 25c; 1,989,450 shares issued. **Property:** Marsh; 12 patented, 1 unpatented claims, Lelande dist.; Burke. **Development:** By 2 tunnels: No. 1, 300 ft. long; No. 2, 2000 ft long; and a vertical shaft 900 ft. deep with 5 intermediate levels, and an inclined shaft 400 ft. long. Total development, approximately 8000 ft. **Plant:** MINE: One I-R 1150 cu. ft. compressor and one 690 cu. ft. Franklin compressor, both electrically driven; complete mining equipment. **MILL:** 200-ton concentrator, including flotation. **Ore:** Lead-silver. **Men employed:** Average, 4. **Remarks:** A large amount of development and exploratory work during the year. The eastern segment of the vein, 940 ft. below the Russell tunnel level, was picked up and followed for over 400 ft. This segment carried some mineralization. An assessment of one cent was levied during the year.

MAYFLOWER MINING CO.

Office: Wallace. **Officers:** G. Scott Anderson, Pres.-Mgr.; W. W. Smith, Sec., both of Wallace. **Inc.:** May 26, 1900. **Capital:** 1,250,000 shares; par value 5c; 952,350 shares issued. **Property:** Mayflower group; 2 patented, 2 unpatented claims, Placer Center dist.; Wallace. **Development:** By 3 tunnels: No. 1, 260 ft. long; No. 2, 2070 ft. long; No. 3, 3136 ft long. **Ore:** Lead-silver.

METALS MINING CO.

Office: E. 327 Boone Ave., Spokane, Wash. **Officers:** George A. Cunningham, Pres.-Mgr.; Robert E. Buckley, Sec., both of Spokane, Wash. **Inc.:** An association. **Capital:** 1,750,000 shares; par value 50c; 997,500 shares issued. **Property:** Comstock group; 15 unpatented claims; Placer Center dist.; Wallace. **Development:** Approximately 3700 ft. of workings. **Ore:** Lead-silver. **Men employed:** Average, 2.

MILITARY MINING & MILLING CO., LTD.

Office: New Madison Hotel, Spokane, Wash. **Officers:** August Renkert, Pres.; George K. Renkert, Sec.-Mgr., both of Spokane, Wash. **Inc.:** April 30, 1907. **Capital:** 1,000,000 shares; par value \$1; 567,000 shares issued. **Property:** 2 patented claims, Lelande dist.; Burke. **Development:** 2 tunnels; No. 1, 150 ft. long; No. 2, 100 ft. long. **Ore:** Copper.

MINERAL FARM MINING CO., LTD.

Office: Mullan. **Officers:** C. J. Carlson, Pres.-Mgr., Spokane, Wash.; C. E. Miller, Sec., Mullan. **Inc.:** Aug. 28, 1903. **Capital:** 1,500,000 shares; par value \$1; 798,676 shares issued. **Property:** Mineral Farm group; 8 patented, 1 unpatented claims, Hunter dist.; Mullan. **Development:** Principally by one tunnel 1200 ft. long. **Ore:** Lead-silver.

MINERAL POINT MINING CO.

Office: Wallace. **Officers:** H. E. Worstell, Pres.; Paul Leuschel, Sec., both of Wallace. **Inc.:** July 7, 1904. **Capital:** 1,200,000 shares; par value \$1; 769,135 shares issued. **Property:** 1 patented, 7 unpatented claims, Evolution dist.; Osburn. **Remarks:** Assessment work only.

MINGO CHIEF MINING CO., LTD.

Office: 1512 W. Riverside Ave., Spokane, Wash. **Officers:** John H. Van Dorn, Pres.-Mgr., Spokane, Wash. **Inc.:** Feb. 16, 1907. **Capital:** 1,500,000 shares; par value \$1, 1,071,432 shares issued. **Property:** Mingo Chief group; 7 patented, 1 unpatented claim; Placer Center dist.; Wallace. **Development:** By 7 tunnels, totaling approximately 1300 ft. **Plant:** Electrically driven 4-drill compressor. **Ore:** Lead-silver.

MOE MINING CO., LTD.

Office: Wallace. **Officers:** W. K. Moe, Pres.-Mgr.; G. W. Dougherty, Sec., both of Wallace. **Inc.:** April 8, 1922. **Capital:** 1,000,000 shares; par value 10c; 600,000 shares issued. **Property:** Gold Creek group; 9 unpatented claims, Hunter dist.; Mullan. **Development:** 4 tunnels: No. 1, 1000 ft. long; No. 2, 800 ft. long; No. 3, 100 ft. long. **Ore:** Lead-silver-copper. **Men employed:** Average, 1. **Remarks:** This company is owned by the president, who started No. 4 tunnel and continued driving it throughout the year whenever his means would permit.

MONTANA-IDAHO COPPER CO.

Office: 1102 Paulsen Bldg., Spokane, Wash. **Officers:** H. F. DeBower, Pres., 13 Astor Place, New York City; W. J. Kirby, Sec., Spokane, Wash.; S. P. Burr, Supt., Delage. **Inc.:** May 7, 1914. **Capital:** 250,000 shares; par value \$10; 107,087 shares issued. **Property:** Monitor group; 10 patented, 34 unpatented claims, St. Regis dist.; Delage. **Development:** One tunnel 8800 ft. long and a vertical shaft 700 ft. deep with 6 intermediate levels. **Plant:** Three 9x8 I-R compressors, driven by 3 Pelton water wheels; I-R steel sharpener; complete mining equipment and camp. **Ore:** Copper-gold. **Men employed:** Average, 10. **Remarks:** Throughout the year the company carried on an extensive development campaign in extending the lower tunnel, which resulted in exposing the vein at a depth of 1800 ft. At this point the ore was of commercial value.

MOON CREEK MINING CO.

Office: Wallace. **Officers:** H. F. Traub, Pres., Walla Walla, Wash.; Otto A. Olsson, Sec., Wallace. **Inc.:** June 25, 1906. **Capital:** 1,500,000 shares; par value \$1; all shares issued. **Property:** Moon Creek group; 3 unpatented claims, Evolution dist.; Kellogg. **Development:** One tunnel, 100 ft. long, and an inclined shaft 300 ft. long, giving 140 ft. vertical depth. **Ore:** Lead-silver.

MOUNTAIN QUEEN MINING CO., LTD.

Office: Murray. **Officers:** William Wylie, Pres.; Walter Keister, Sec., both of Murray. **Inc.:** Sept. 9, 1907. **Capital:** 1,000,000 shares; par value \$1; 503,700 shares issued. **Property:** Mountain Queen group; 10 unpatented claims, Eagle dist.; Murray. **Development:** One tunnel 500 ft. long. **Ore:** Lead-silver. **Remarks:** Assessment work only.

MOUNTAIN ROSE MINING CO.

Office: Kellogg. **Officers:** D. W. Knudson, Pres., Kellogg; Henry Teigen, Sec., Seattle, Wash. **Inc.:** Feb. 1, 1915. **Capital:** 1,000,000 shares; par value 50c; 350,000 shares issued. **Property:** 4 unpatented claims, Yreka dist.; Kellogg. **Development:** One tunnel, 1100 ft. long. **Ore:** Lead-silver.

MULLAN MILLING CO.

Office: Kellogg. **Officers:** James A. Bean, Pres., 1089 Leighton Ave., Los Angeles, Calif. **Inc.:** Copartnership. **Capital:** 200 shares; par value \$200; 189 shares issued. **Property:** Lease on tailings from Ontario Mining Co.; Yreka dist.; Kellogg. **Plant:** MILL: Fine grinding flotation. **Ore:** Lead-silver. **Men employed:** Average, 16. **Remarks:** A successful tailings recovery plant.

MULLAN MINING CO.

Office: Wallace. **Officers:** Charles M. Baillie, Pres.-Mgr., Mullan; L. L. Leighty, Sec., Wallace. **Inc.:** Nov. 10, 1899. **Capital:** 1,000,000 shares; par value 5c; shares issued, unknown. **Property:** Mullan group; 2 patented, 1 unpatented claims, Hunter dist.; Mullan. **Development:** Approximately 2000 ft. of underground workings. **Ore:** Lead-silver.

MURRAY HILL MINING CO.

Office: Jamieson Blk., Spokane, Wash. **Officers:** C. E. Mallette, Pres.; A. Brownlow, Sec., both of Spokane, Wash. **Inc.:** Nov. 20, 1914. **Capital:** 1,500,000 shares; par value \$1; all shares issued. **Property:** Black Horse group; 9 unpatented claims, Summit dist.; Murray. **Ore:** Zinc.

NATIONAL COPPER MINING CO.

Office: Wallace. **Officers:** August Paulsen, Pres., Spokane, Wash; William J. Stratton, Acting Sec., Wallace. **Remarks:** "This company has not been in operation for several years and the same information furnished previously will apply in so far as the development and we have been and are still nonproductive." William J. Stratton, Acting Sec.

NATIONAL LEAD MINING CO.

Office: Wallace, Box 765. **Officers:** P. J. Gearon, Pres.; J. L. McCormick, Acting Sec., both of Wallace. **Inc.:** Sept. 21, 1910. **Capital:** 1,000,000 shares; par value \$1; 520,000 shares issued. **Property:** National Lead; 7 unpatented claims, Hunter dist.; Mullan. **Development:** 3 tunnels: No. 1, 250 ft. long; No. 2, 100 ft. long; No. 3, 125 ft. long.

NEW HOPE MINING CO., LTD.

Office: Wallace. **Officers:** Eugene Thomas, Pres.-Mgr., Osburn; Otto A. Olsson, Sec., Wallace. **Inc.:** July 6, 1900. **Capital:** 1,000,000 shares; par value 5c; all shares issued. **Property:** New Hope group; 12 unpatented claims, Evolution dist.; Osburn. **Development:** By 3 tunnels: No. 1, 500 ft. long; No. 2, 1100 ft. long. **Ore:** Lead-silver. **Men employed:** Average, 2. **Remarks:** During the year work was started on a lower tunnel, which will be a crosscut intersecting three veins. This work progressed continuously throughout the year. Last assessment, 2 mills levied Dec. 9, 1922.

NEW ROAD MINING CO.

Office: Mullan. **Officers:** Gust Lindroos, Pres.-Mgr.; D. R. Scott, Sec., both of Mullan. **Inc.:** May 1, 1922. **Capital:** 1,000,000 shares; par value 10c; 509,000 shares issued. **Property:** New Road group; 2 unpatented claims, Hunter dist.; Mullan. **Ore:** Lead-silver.

NINE MILE MINING CO.

Office: Wallace. **Officers:** Ole H. Linn, Pres.; C. W. Betts, Sec., both of Wallace. **Inc.:** Oct. 6, 1899. **Capital:** 1,000,000 shares; par value 10c; 841,978 shares issued. **Property:** Nine Mile group; 6 patented, 16 unpatented claims, Placer Center dist.; Wallace. **Development:** Approximately 4600 ft. of underground workings. **Ore:** Lead-silver. **Remarks:** Stock increased to 2,000,000 shares and company consolidated with Log Cabin M. & M. Co.

NONPAREIL COPPER MINING CO.

Office: Wallace. **Officers:** Mary C. McAllister, Pres.-Mgr.; Herman J. Rossi, Sec., both of Wallace. **Inc.:** Nov. 1, 1906. **Capital:** 1,500,000 shares; par value \$1; 800,000 shares issued. **Property:** Nonpareil; 3 patented claims, Hunter dist.; Mullan. **Development:** 2 tunnels: No. 1, 380 ft. long; No. 2, 100 ft. long. **Ore:** Lead-silver. **Remarks:** Idle since 1916.

NORTH AMERICAN MINING & MILLING CO., LTD.

Office: Kellogg. **Officers:** John J. Presley, Pres.-Mgr., Kellogg; Joseph F. Morton, Sec., Spokane, Wash. **Inc.:** June 8, 1903. **Capital:** 1,500,000 shares; par value \$1; 1,000,000 shares issued. **Property:** North American group; 24 patented, 3 unpatented claims, Yreka dist.; Kellogg. **Development:** One tunnel 1750 ft. long. **Ore:** Lead-silver. **Remarks:** Assessment work only.

NORTH BUNKER HILL MINING CO., LTD.

Office: Kellogg, Box 317. **Officers:** Elmer Brown, Pres.; N. T. Hardy, Sec.-Mgr., both of Kellogg. **Inc.:** Feb. 16, 1907. **Capital:** 1,250,000 shares; par value \$1; 1,138,888 shares issued. **Property:** 4 patented claims, Yreka dist.; Wardner. **Development:** Over 10,000 ft. of underground workings. **Plant:** Electrically driven I-R compressor; air driven hoist and complete mining equipment. **Ore:** Lead-silver. **Men employed:** Average, 4. **Remarks:** This company has been actively engaged in an extensive development campaign for a number of years, and is to be congratulated upon its persistency. Recent reports indicate that the company is to be rewarded. Last assessment, 4 mills, levied Dec. 23, 1922.

NORTH IDAHO MINING CO.

Office: Wallace. **Officers:** C. M. Johnson, Pres.-Mgr.; G. W. Dougherty, Sec., both of Wallace. **Inc.:** March 14, 1900. **Capital:** 1,500,000 shares; par value \$1; 844,048 shares issued. **Property:** 3 patented claims, Placer Center dist.; Wallace. **Development:** By 2 tunnels: No. 1, 700 ft. long; No. 2, 50 ft. long. **Ore:** Lead-silver.

NORTH STAR MINING CO.

Office: Wallace. **Officers:** John H. Hansen, Pres.; T. S. Tweed, Sec., both of Wallace. **Inc.:** March 16, 1899. **Capital:** 1,000,000 shares; par value \$1; 460,320 shares issued. **Property:** North Star; 2 unpatented claims; St. Joe dist.; Falcon. **Development:** 2 tunnels: No. 1, 1500 ft. long; No. 2, 200 ft. long. **Ore:** Copper-gold-silver.

NORTH STAR MINING & DEVELOPMENT CO.

Office: Wallace. **Officers:** D. E. Wherry, Pres., Selah, Wash.; G. W. Dougherty, Sec.-Mgr., Wallace. **Inc.:** April 20, 1920. **Capital:** 1,250,000 shares; par value \$1; 1,141,170 shares issued. **Property:** 5 unpatented claims, Placer Center dist.; Wallace. **Development:** Principally by one tunnel, 1300 ft. long. **Ore:** Lead-silver. **Remarks:** Main tunnel extended under contract during the year. Assessment of 1 mill levied Sept. 9, 1922.

NORTHERN LIGHT MINING & MILLING CO.

Office: 112 Court House St. Paul, Minn. **Officers:** W. G. Nye, Pres.; B. E. Harmon, Sec., both of Minneapolis, Minn. **Inc.:** Feb. 26, 1915. **Capital:** 1,500,000 shares; par value 5c; 1,321,607 shares issued. **Property:** Northern Light; one patented claim, Pine Creek, Yreka dist.; Kellogg. **Remarks:** Idle since 1918.

OLD CHARLES DICKENS MINING CO.

Office: 427 Hutton Bldg., Spokane, Wash. **Officers:** A. D. Gritman, Pres.; Charles D. Roeder, Sec., both of Spokane, Wash. **Inc.:** Feb. 15, 1909, as the Idaho Knickerbocker Mines Co. Name changed May 8, 1917. **Capital:** 2,500,000 shares; par value \$1; all shares issued. **Property:** Charles Dickens group; 14 unpatented claims, Yreka and Evolution dists.; Kellogg. **Development:** Approximately 4200 ft. of underground workings. **Plant:** MINE: 35 h. p. hoist; 900 cu. ft. compressor. **MILL:** Concentrator. **Ore:** Lead-silver.

OOM PAUL CONSOLIDATED MINING CO.

Office: Wallace. **Officers:** James F. McCarthy, Pres.-Mgr.; L. E. Hanley, Sec., both of Wallace. **Inc.:** April 29, 1907. **Capital:** 1,600,000 shares; par value \$1; all shares issued. **Property:** Oom Paul group; 10 patented claims, Lelande dist.; Burke. **Development:** Over 5000 ft. of workings. **Plant:** Compressor and complete mining equipment. **Ore:** Lead-silver.

OREANO MINING CO., LTD.

Office: Wallace, Box 236. **Officers:** John C. Glahe, Pres.; John Dolan, Acting Sec., both of Wallace. **Inc.:** Nov. 10, 1902. **Capital:** 1,000,000 shares; par value \$1; 886,344 shares issued. **Property:** Oreano group; 5 patented claims, Lelande dist.; Burke. **Development:** Principally by one tunnel, which is 1600 ft. long, with 1700 ft. of drifting. **Ore:** Lead-silver. **Remarks:** During the year the main tunnel was extended 300 ft. under a contract. To expedite this work the contractors installed compressor and complete mining equipment.

OSCEOLA MINING CO.

Office: Wallace. **Officers:** Charles F. Ruddy, Pres.-Mgr.; George Miner, Sec., both of Wallace. **Inc.:** Sept. 30, 1915. **Capital:** 1,000,000 shares; par value \$1; 600,000 shares issued. **Property:** War Eagle group; 9 unpatented claims, Yreka dist.; Kellogg. **Development:** Principally by one tunnel, 2000 ft. long. **Ore:** Lead-silver.

OSSASKA MINING CO.

Office: 109 S. Stevens St., Spokane, Wash. **Officers:** J. H. Marks, Pres.-Mgr.; W. E. Allen, Sec., both of Spokane, Wash. **Inc.:** Nov. 29, 1907. **Capital:** 1,000,000 shares; par value \$1; 653,789 shares issued. **Property:** 10 unpatented claims; Wallace. **Development:** Principally by one tunnel 2000 ft long. **Ore:** Lead-silver.

PACIFIC MINING & MILLING CO.

Office: Wallace. **Officers:** Louis Kuhn, Pres., Mullan; A. H. Featherstone, Sec., Wallace. **Inc.:** April 13, 1898. **Capital:** 1,000,000 shares; par value \$1; 850,000 shares issued. **Property:** 3 patented claims, Lelande dist.; Gem **Ore:** Lead-silver.

PANDORA COPPER MINING CO., LTD.

Office: Wallace. **Officers:** Walter H. Hanson, Pres.; J. C. Weatherhead, Sec., both of Wallace. **Inc.:** Oct. 23, 1906. **Capital:** 1,000,000 shares; par value \$1; 433,550 shares issued. **Property:** 10 unpatented claims, Hunter dist.; Mullan. **Development:** 2 tunnels: No. 1, 1900 ft. long; No. 2, 100 ft. long. **Ore:** Copper-silver. **Remarks:** Assessment work only.

PARAGON MINING CO.

Office: Commerce Bldg., St. Paul, Minn. **Officers:** George S. Monson, Pres.; F. O. Hamer, Sec., both of St. Paul, Minn.; C. I. Grinsmoe, Mgr., Murray. **Inc.:** Sept. 20, 1901. **Capital:** 150,000 shares; par value \$10; 126,869 shares issued. **Property:** Paragon group; 19 patented, 33 unpatented claims, Summit dist.; Murray. **Development:** Total development approximately 18,000 ft. **Plant:** MINE: Electrically driven compressor; air driven hoist; complete mining equipment and camp. MILL: 100-ton concentrator. **Ore:** Lead-zinc-silver. **Men employed:** Average, 10. **Remarks:** In addition to doing extensive development work, the flow sheet of the mill was entirely changed and the power line extended 4 miles to the mine.

PARK COPPER & GOLD MINING CO., LTD.

Office: Wallace. **Officers:** O. W. Lewis, Pres.-Mgr.; N. J. Stockbridge, Sec., both of Wallace. **Inc.:** Aug. 25, 1899. **Capital:** 1,500,000 shares; par value 10c; 1,377,316 shares issued. **Property:** 6 patented claims; Stevens Peak, Hunter dist.; Mullan. **Ore:** Copper.

PATRICIA MINING CO.

Office: Kellogg. **Officers:** Frank Brooks, Pres.-Mgr.; D. W. Price, Sec., both of Kellogg. **Inc.:** April 17, 1922. **Capital:** 1,500,000 shares; par value 10c; shares issued, none. **Remarks:** Black Diamond, Iron King, and Blue Grouse groups, 20 claims, on Pine Creek, Yreka dist., Kellogg, acquired and an extensive development campaign inaugurated during the year.

PAWHATAN MINING CO., LTD.

Office: Wallace. **Officers:** Joseph Turner, Pres.; O. R. Young, Sec., both of Wallace. **Inc.:** Dec. 4, 1899; charter forfeited Dec. 1, 1920. **Capital:** 1,000,000 shares; par value 10c; shares issued, unknown. **Property:** 2 unpatented claims, Evolution dist.; Osburn. **Development:** By 2 tunnels: No. 1, 60 ft. long; No. 2, 400 ft. long. **Ore:** Lead-silver. Assessment work only.

PEARSON MINING CO.

Office: Wallace. **Officers:** Morris Pearson, Pres.; John F. Ferguson, Sec.-Mgr., both of Wallace. **Inc.:** April 26, 1920. **Capital:** 250,000 shares; par value \$1; shares issued, unknown. **Property:** 25 unpatented claims, St. Joe dist.; Falcon. **Development:** Principally by one tunnel 2300 ft. long. **Plant:** Gas driven Sullivan compressor; complete mining equipment and camp. **Ore:** Copper-gold. **Men employed:** Average, 5. **Remarks:** Active development work throughout the year.

PHOENIX MINING & MILLING CO., LTD.

Office: Wallace. **Officers:** Norman Ebbley, Pres.-Mgr.; E. C. Allen, Sec., both of Wallace. **Inc.:** Nov. 20, 1905. **Capital:** 1,000,000 shares; par value \$1; shares issued, unknown. **Property:** 14 unpatented claims, Lelande dist.; Wallace. **Development:** 2 tunnels: No. 1, 100 ft. long; No. 2, 1200 ft. long. **Ore:** Lead-silver. **Remarks:** Assessment work only.

PINE CREEK MINING & MILLING CO.

Office: Wallace. **Officers:** C. S. Stone, Pres.; O. W. Lewis, Sec., both of Wallace; Harry Ingalls, Mgr., Mullan. **Inc.:** April 24, 1916. **Capital:** 1,500,000 shares; par value 10c; 1,173,805 shares issued. **Property:** Hilarity; 13 unpatented claims, Pine Creek, Yreka dist.; Kellogg. **Ore:** Lead-silver. **Remarks:** A small amount of development work under contract. Assessment of 1 mill levied July 20, 1922.

PIONEER MINING CO., LTD.

Office: Wallace. **Officers:** O. A. Olin, Pres., Los Angeles, Calif; Herman Marquardt, Sec., Wallace. **Inc.:** Nov. 22, 1916. **Capital:** 1,500,000 shares; par value 25c; 1,034,933 shares issued. **Property:** Pioneer group; 12 unpatented claims, Beaver dist.; Carbonite. **Ore:** Lead-silver. **Remarks:** Assessment work only. An assessment of 2 mills levied July 29, 1922.

PROGRESS GOLD MINING CO.

Officers: Harry Clark, Pres.-Mgr.; Louisa Clark, Sec., both of Prichard. **Inc.:** Aug. 17, 1920. **Capital:** 1,000,000 shares; par value 10c; 308,500 shares issued. **Property:** 15 unpatented claims; Coeur d'Alene dist.; Prichard. **Development:** By 4 tunnels, totaling over 500 ft. **Ore:** Gold. **Men employed:** Average, 2. **Remarks:** Actively engaged throughout the year in driving a lower tunnel.

PURITAN MINING CO., LTD.

Office: Wallace. **Officers:** P. J. Maggy, Clerk, Wallace. **Inc.:** Sept. 30, 1905. **Capital:** 1,500,000 shares; par value \$1; 1,326,700 shares issued. **Property:** 7 unpatented claims, Placer Center dist.; Sunset. **Development:** Approximately 5000 ft. of crosscuts and drifts. **Plant:** Complete mining camp.

RAINBOW MINING & MILLING CO., LTD.

Office: 745 Peyton Bldg., Spokane, Wash. **Officers:** George Austin, Pres.-Mgr.; R. P. Woodworth, Sec., both of Spokane, Wash. **Inc.:** June 20, 1907. **Capital:** 2,000,000 shares; par value 25c; 1,233,153 shares issued. **Property:** 7 patented, 11 unpatented claims, Little North Fork dist., Kootenai County; and Evolution dist.; Osburn. **Ore:** Lead-silver. **Remarks:** A small amount of development on both groups during the year. Last assessment, 3 mills, levied Sept. 16, 1922.

RAY JEFFERSON MINING CO.

Office: Wallace. **Officers:** James J. Murphy, Pres.-Mgr., Burke; P. J. Maggy, Sec., Wallace. **Inc.:** March 31, 1910. **Capital:** 2,000,000 shares; par value 25c; shares issued, unknown. **Property:** Ray Jefferson; 30 patented claims, Beaver dist.; Carbonate. **Development:** Approximately 11,300 ft. of underground workings. **Plant:** Mine and mill buildings and machinery. **Remarks:** Idle throughout the year. An assessment of 5 mills levied June 5, 1922.

RED CLOUD MINING CO.

Office: Wallace. **Officers:** A. L. Honeker, Pres.,; Herman J. Rossi, Sec.-Mgr., both of Wallace. **Inc.:** Sept. 1, 1896. **Capital:** 500,000 shares; par value \$1; 236,369 shares issued. **Property:** Red Cloud; 1 patented claim, Yreka dist.; Kellogg. **Ore:** Lead-silver. An assessment of 3 mills levied Nov. 21, 1922.

REED LEVEL MINING CO.

Office: Wardner. **Officers:** Elmer C. Brain, Pres.-Mgr.; John E. McEachran, Sec., both of Kellogg. **Inc.:** Oct. 30, 1920. **Capital:** 3000 shares; par value \$100; all shares issued. **Property:** Lease on upper workings of Bunker Hill. **Ore:** Lead-silver. **Men employed:** Average, 16. **Remarks:** Mining equipment and power furnished by Bunker Hill & Sullivan M. & C. Co. and ore milled at the plant owned by the Cooperative Milling Co. A large tonnage of ore was mined and milled during the year.

REX CONSOLIDATED MINING CO.

Office: 25 Broad St., New York City. **Officers:** L. E. Wicher, Pres.; S. L. Sherman, Sec., both of New York City; Raymond Guyer, Mgr., 318 Symonds Bldg., Spokane, Wash. **Inc.:** Sept. 1, 1915. **Capital:** 5,000,000 shares; par value 25c; 4,000,000 shares issued. **Property:** Rex and Red Monarch groups; 6 patented, 52 unpatented claims, Beaver dist.; Wallace. **Development:** Principally by 3 tunnels: No. 1, 44 ft. long; No. 2, 1200 ft. long; No. 3, 600 ft. long; and 2 shafts, the principal one being 700 ft. deep, with 200-ft. intermediate levels. Total development approximately 15,000 ft. **Plant:** MINE: Allis-Chalmers electrically driven hoist; electrically driven 2-stage 20 cu. ft. I-R compressor; sorting plant; complete mining equipment and camp; 1¼ mile Riblet tram connecting mine and mill. MILL: 250-ton concentrator including flotation. **Ore:** Lead-zinc-silver. **Men employed:** Average, 4. **Remarks:** During the year this company acquired the property of the Red Monarch Mining Co., and maintained prospecting work throughout the year.

RHODE ISLAND MINING CO., LTD.

Office: Wallace. **Officers:** A. G. Webb, Pres.; C. E. Clarke, Sec., both of Wallace. **Inc.:** July 13, 1900. **Capital:** 1,000,000 shares; par value 5c; 440,406 shares issued. **Property:** Rhode Island group; 4 unpatented claims, Evolution dist.; Wallace. **Development:** Approximately 900 ft. of workings. **Ore:** Lead-zinc-silver. **Remarks:** Assessment work only. An assessment of 1 mill levied April 25, 1922.

ROANOKE MINING CO., LTD.

Office: Wallace. **Officers:** Herman J. Rossi, Pres.; F. C. Stone, Sec.-Mgr., both of Wallace. **Inc.:** Jan. 2, 1907. **Capital:** 1,500,000 shares; par value \$1; 1,197,833 shares issued. **Property:** Roanoke group; 7 patented claims, Yreka dist.; Kellogg. **Development:** Approximately 1000 ft. **Plant:** Electrically driven hoist. **Ore:** Lead-silver.

ROBERTA MINING & MILLING CO.

Office: 303 Silver Bow Bldg., Butte, Mont. **Officers:** Joseph Lutey, Pres.; John A. Shelton, Sec., both of Butte, Mont. **Inc.:** Sept. 19, 1905. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** 5 patented, 3 unpatented claims, Lelande dist.; Gem. **Development:** Approximately 700 ft. of workings. **Ore:** Lead-zinc-silver.

ROB ROY MINING CO.

Office: Wallace. **Officers:** S. D. McDonald, Pres.-Mgr.; G. W. Dougherty, Sec., both of Wallace. **Inc.:** Feb. 16, 1907. **Capital:** 1,500,000 shares; par value \$1; 1,060,510 shares issued. **Property:** 6 unpatented claims, Beaver dist.; Sunset. **Ore:** Lead-silver. **Remarks:** Assessment work only. An assessment of 2 mills levied Nov. 15, 1922.

ROCKFORD MINING CO., LTD.

Office: Wallace. **Officers:** Charles Garanson, Pres.-Mgr., Gem; Walter H. Hanson, Sec., Wallace. **Inc.:** Sept. 9, 1907. **Capital:** 1,500,000 shares; par value 25c; all shares issued. **Property:** 11 unpatented claims, Yreka dist.; Wallace. **Development:** By 5 tunnels, the principal one of which is 1200 ft. long. Total development approximately 2600 ft. **Ore:** Lead-silver. **Men employed:** Average, 2. **Remarks:** A small amount of development work throughout the year. An assessment of 2 mills levied June 1, 1922.

ROYAL MINING CO.

Office: Coeur d'Alene. **Officers:** A. E. Bronson, Pres., Gibbs; Soren Simson, Sec., Coeur d'Alene. **Inc.:** Dec. 24, 1910. **Capital:** 1,500,000 shares; par value \$1; 963,673 shares issued. **Property:** Royal group; 20 unpatented claims; West Fork of Slate Creek; St. Joe dist.; Avery. **Development:** Approximately 2000 ft. of workings. **Plant:** 6x6 compressor driven by a Pelton water wheel; complete mining equipment and camp. **Ore:** Lead-silver-copper. **Men employed:** Average, 4. **Remarks:** Last assessment, 2 mills, levied Oct. 4, 1922.

RUTH CONSOLIDATED MINING & MILLING CO.

Office: 727 Old National Bank Bldg., Spokane, Wash. **Officers:** C. M. Crego, Pres.; G. D. Crego, Sec., both of Spokane, Wash. **Inc.:** Sept. 15, 1906. **Capital:** 1,500,000 shares; par value \$1; all shares issued. **Property:** Ruth group; 7 unpatented claims, Placer Center dist.; Wallace. **Development:** By 2 tunnels: No. 1, 800 ft. long; No. 2, 2000 ft. long. **Plant:** Electrically driven Laidlaw-Dunn-Gordon compressor; complete mining equipment. **Ore:** Lead-silver. **Remarks:** A small amount of development work during the year.

SAINT JOE MINING CO., LTD.

Office: Wallace, Box 18. **Officers:** George G. Evans, Pres.; Marie W. Clary, Sec., both of Wallace. **Inc.:** May 22, 1920. **Capital:** 600,000 shares; par value 10c; 300,000 shares issued. **Property:** 6 unpatented claims, St. Joe dist.; Avery. **Ore:** Lead-silver. **Remarks:** Assessment work only.

SAMSON MINING & DEVELOPMENT CO., LTD.

Office: Kellogg. **Officers:** D. W. Raines, Pres., Spokane, Wash.; R. L. Brainard, Sec., Kellogg. **Inc.:** Aug. 15, 1904. **Capital:** 1,000,000 shares; par value \$1; 900,000 shares issued. **Property:** Sampson group; 8 unpatented claims, Eagle dist.; Prichard. **Development:** Principally by one tunnel 900 ft. long. **Ore:** Lead-silver. **Men employed:** Average, 2. **Remarks:** Development work during the year consisted in driving on the vein.

SAN FRANCISCO MINING CO., LTD.

Office: Kellogg. **Officers:** T. R. Mason, Pres.; C. O. Barnhart, Sec.-Mgr., both of Kellogg. **Inc.:** Sept. 29, 1911. **Capital:** 1,000,000 shares; par value \$1; 603,000 shares issued. **Property:** San Francisco group; 4 unpatented claims, Yreka dist.; Kellogg. **Development:** By 4 tunnels, totaling approximately 900 ft. **Ore:** Lead-silver. **Remarks:** Assessment work only.

SENATOR MINING CO.

Office: 615 Hyde Bldg., Spokane, Wash. **Officers:** E. Ehrenberg, Pres.; M. W. Neary, Sec., both of Spokane, Wash. **Inc.:** May 3, 1920. **Capital:** 2,500,000 shares; par value 25c; 1,442,524 shares issued. **Property:** Senator group; 18 patented claims, Lelande dist.; Gem. **Remarks:** Under lease and bond to Coeur d'Alene Syndicate Mining Co., which see.

SHERMAN LEAD CO.

Office: Wallace. **Officers:** P. J. Maggy, Sec., Wallace. **Inc.:** Nov. 4, 1918. **Capital:** 3,500,000 shares; par value 25c; all shares issued. **Property:** 4 claims, Lelande dist.; Burke. **Development:** Approximately 1100 ft. of underground workings.

SIDNEY MINING CO.

Office: Kellogg. **Officers:** L. W. Gay, Pres.-Mgr.; W. I. Simons, Sec., both of Kellogg. **Inc.:** June 20, 1910. **Capital:** 1,500,000 shares; par value \$1; 1,489,580 shares issued. **Property:** Sidney group; 18 unpatented claims, Pine Creek, Yreka dist.; Kellogg. **Development:** Principally by one tunnel which is over 1500 ft. long. **Ore:** Lead-zinc-silver. **Men employed:** Average, 6. **Remarks:** In addition to being operated by leasers who shipped a small amount of ore, some development work was done by an option holder.

SIERRA NEVADA CONSOLIDATED MINING CO.

Office: Kellogg. **Officers:** Stanly A. Easton, Pres.-Mgr.; C. W. Simmons, Sec., both of Kellogg. **Inc.:** May 21, 1887. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** Sierra Nevada group; 5 patented claims, Yreka dist.; Kellogg. **Development:** Principally by 4 tunnels: No. 1, 3700 ft. long; No. 2, 800 ft. long; No. 3, 750 ft. long; No. 4, 660 ft. long. Total development approximately 10,000 ft. **Ore:** Lead-silver. **Men employed:** Average, 17. **Remarks:** Mine equipment furnished and ore milled by Bunker Hill & Sullivan M. & C. Co.

SILVERADO MINING CO.

Office: Hutton Bldg., Spokane, Wash. **Officers:** J. E. Orr, Pres.; C. D. Muxen, Sec.-Mgr., both of Spokane, Wash. **Inc.:** June 28, 1914. **Capital:** 2,500,000 shares; par value \$1; 1,346,464 shares issued. **Property:** Silverado group; 21 unpatented claims, Evolution dist.; Osburn. **Development:** Principally by one tunnel which is over 4000 ft. long. **Plant:** MINE: Electrically driven I-R compressor, and complete mining equipment. MILL: "Ball mill and flotation tanks." **Ore:** Lead-silver. **Men employed:** Average, 2. **Remarks:** A small amount of development work throughout the year.

SILVER CLIFF GOLD & COPPER MINING CO., LTD.

Office: Wallace. **Officers:** Thomas Jay, Pres.; Ed. C. Young, Sec., both of Wallace. **Inc.:** Oct. 6, 1900. **Capital:** 1,500,000 shares; par value \$1; 388,300 shares issued. **Property:** Silver Cliff group; 13 unpatented claims, Hunter dist.; Mullan. **Development:** Over 2 miles of underground workings. **Plant:** An old water driven compressor. **Ore:** Copper-silver. **Men employed:** Average, 2.

SILVER CRESCENT MINING CO.

Office: 415 Chamber of Commerce Bldg., Spokane, Wash. **Officers:** G. B. Dennis, Pres.; F. C. Bailey, Sec.-Mgr., both of Spokane, Wash. **Inc.:** Nov. 22, 1916 as Placer Creek Silver-Lead Mining & Milling Co.; name changed, Aug. 31, 1922. **Capital:** 1,000,000 shares; par value \$1; 352,000 shares issued. **Property:** Evolution group; 9 unpatented claims, Placer Center dist.; Wallace. **Development:** Principally by one tunnel 2000 ft. long. **Ore:** Lead-silver. **Remarks:** About 200 ft. of development work done during the year by contractors. The results were very encouraging. An assessment of 1 mill levied Aug. 1, 1922.

SILVER DALE AND BIG HILL MINING CO.

Office: Kellogg. **Officers:** Richard Niemier, Pres.; D. W. Knudson, Sec., both of Kellogg. **Inc.:** Sept. 10, 1917. **Capital:** 1,000,000 shares; par value 1c; 450,000 shares issued. **Property:** 25 unpatented claims; Big Creek, Yreka dist.; Kellogg. **Development:** Principally by one tunnel which is over 1300 ft. long. **Plant:** Water driven 12x12 compressor. **Ore:** Lead-silver. **Men employed:** Average, 3. **Remarks:** Continuous development during the year. Last assessment, 2 mills, levied Nov. 28, 1922.

SILVER EAGLE MINING CO., LTD.

Office: Wallace. **Officers:** John J. Hogus, Pres.; C. W. Betts, Sec., both of Wallace. **Inc.:** Nov. 12, 1906. **Capital:** 1,000,000 shares; par value \$1; 792,775 shares issued. **Property:** Silver Eagle group; 13 unpatented claims, Placer Center dist.; Wallace. **Development:** 2 tunnels: No. 1, 900 ft. long; No. 2, 300 ft. long. **Ore:** Lead-silver. **Remarks:** Assessment work only.

SILVER MOON MINING CO., LTD.

Office: Palmerston Hotel, Spokane, Wash. **Officers:** Eugene Sage, Pres.-Mgr., Burke; Gus Ehrenberg, Sec., Spokane, Wash. **Inc.:** Aug. 31, 1906. **Capital:** 1,500,000 shares; par value \$1; 863,960 shares issued. **Property:** Silver Moon group; 10 unpatented claims, Lelande dist.; Gem. **Development:** Over 3000 ft. of tunnels and drifts, the principal one of which is 2800 ft. long. **Plant:** Electrically driven 200 cu. ft. compressor; complete mining equipment. **Ore:** Lead-silver. **Remarks:** Assessment work only.

SILVER MOUNTAIN MINING CO., LTD.

Officers: Phil Tice, Pres.; W. E. Horstkotte, Sec., both of Potlatch. **Inc.:** June 6, 1907. **Capital:** 1,500,000 shares; par value \$1; 695,170 shares issued. **Property:** 4 patented, 12 unpatented claims, Hunter dist.; Wallace. **Development:** Approximately 2000 ft. of underground workings. **Ore:** Lead-silver. **Men employed:** Average, 2. **Remarks:** A small amount of development work during the year. Last assessment, 2 mills, levied Dec. 29, 1922.

SILVER RANGE MINING & MILLING CO.

Office: 418 Fernwell Bldg., Spokane, Wash. **Officers:** C. S. Crews, Pres., Spokane, Wash.; E. M. Burt, Sec.-Mgr., Wallace. **Inc.:** Feb. 7, 1918. **Capital:** 1,500,000 shares; par value \$1; 900,000 shares issued. **Property:** Silver Range group; 7 unpatented claims, Placer Center dist.; Wallace. **Development:** 400 ft. of tunnels. **Ore:** Lead-silver. **Remarks:** Assessment work only.

SILVER REEF MINING CO.

Office: 1902 E. 5th Ave., Spokane, Wash. **Officers:** J. W. Buhler, Pres.-Mgr.; H. Hoffman, Sec., both of Spokane, Wash. **Inc.:** April 6, 1920. **Capital:** 12,000,000 shares; par value 10c; 4,200,000 shares issued. **Property:** 4 unpatented claims, Hunter dist.; Mullan. **Development:** 2 tunnels: No. 1, 1200 ft. long; No. 2, 150 ft. long. **Plant:** Electrically driven compressor. **Ore:** Lead-silver. **Men employed:** Average, 2. **Remarks:** A small amount of development work during the year.

SISTER MINING & MILLING CO., LTD.

Office: Wallace. **Officers:** Frank P. Markwell, Pres., Los Angeles, Calif.; Everett H. Pattison, Sec., Long Beach, Calif. **Inc.:** Dec. 12, 1899. **Capital:** 1,500,000 shares; par value 10c; all shares issued. **Property:** Sister group; 7 patented claims, Placer Center dist.; Wallace. **Ore:** Lead-silver.

SLAVONIAN MINING CO.

Office: Wallace. **Officers:** Risto V. Kajovich, Pres.-Mgr., Wardner; G. W. Dougherty, Sec., Wallace. **Inc.:** Nov. 26, 1910. **Capital:** 1,500,000 shares; par value \$1; 554,200 shares issued. **Property:** 3 unpatented claims, Yreka dist.; Wardner. **Development:** Principally by one tunnel 900 ft. long. **Ore:** Lead-silver. **Remarks:** A small amount of development work during the year with a power connection from the Last Chance compressor. An assessment of 1 mill levied Jan. 25, 1922.

SMUGGLER VIRGINIA MINING CO.

Office: Room 8 Gerniond Bldg., Spokane, Wash. **Officers:** D. Holzman, Pres.; J. H. Rubens, Sec., both of Spokane, Wash. **Inc.:** April 10, 1907. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** 5 patented claims. **Ore:** Lead-silver.

SNOWSHOE MINING CO.

Office: Mullan. **Officers:** P. J. Gearon, Pres., Wallace; J. L. Martin, Sec., Mullan. **Inc.:** Sept. 30, 1903. **Capital:** 1,000,000 shares; par value 10c; 460,000 shares issued. **Property:** Snowshoe; 8 patented claims, Hunter dist.; Mullan. **Development:** Approximately 3300 ft. of workings, the principal of which are No. 2 tunnel, 1800 ft. long and No. 1 tunnel, 1500 ft. long. **Plant:** Electrically driven 3-drill compressor. **Ore:** Copper-silver.

SNOW STORM MINES CONSOLIDATED

Office: 922 Old National Bank Bldg., Spokane, Wash. **Officers:** Leo Greenough, Pres.; W. J. Beaton, Sec., both of Spokane, Wash. **Inc.:** May 20, 1916. **Capital:** 2,500,000 shares; par value 25c; all shares issued. **Property:** Snow Storm; 16 patented, 14 unpatented claims, Hunter dist.; Mullan. **Remarks:** Idle since 1914.

SONORA MINING & MILLING CO.

Office: Wallace. **Officers:** A. H. Featherstone, Pres.; W. A. Smith, Sec.-Mgr., both of Wallace. **Inc.:** Nov. 5, 1897. **Capital:** 1,000,000 shares; par value \$1; 954,583 shares issued. **Property:** Sonora group; 7 patented, 7 unpatented claims, Lelande dist.; Burke. **Development:** Principally by 2 tunnels: No. 1, 100 ft. long; No. 2, 2300 ft. long. Total development approximately 5700 ft. **Ore:** Lead-silver. **Remarks:** Property active during the year, and the disclosures are such that new interest is again being shown.

SPOKANE MINING & MILLING CO.

Office: Spokane, Wash. **Officers:** M. E. Wees, Pres., 1334 S. Grand St., Los Angeles, Calif.; G. W. Stocker, Sec.-Mgr., Court House, Spokane, Wash. **Inc.:** Aug. 15, 1899. **Capital:** 500,000 shares; par value 5c; all shares issued. **Property:** 4 patented claims, Yreka dist.; Kellogg. **Remarks:** Property under lease to Mullan Milling Co.

SPOKANE TUNNEL MINING CO.

Office: Wallace. **Officers:** A. C. Blue, Pres.; Otto A. Olsson, Sec., both of Wallace. **Inc.:** Oct. 29, 1906. **Capital:** 1,500,000 shares; par value \$1; all shares issued. **Property:** 3 unpatented claims, Placer Center dist.; Wallace. **Development:** Approximately 1200 ft. of workings. **Ore:** Lead-silver. **Remarks:** A small amount of development work during the year.

SPRINGFIELD MINING CO., LTD.

Office: Wallace. **Officers:** O. E. Anderson, Pres.-Mgr., Burke; Mrs. Tillie Zeitfuchs, Sec., Wallace. **Inc.:** April 30, 1904. **Capital:** 1,000,000 shares; par value \$1; 788,657 shares issued. **Property:** Springfield group; 4 patented claims, Hunter dist.; Mullan.

SQUARE DEAL MINING & MILLING CO., LTD.

Office: Coeur d'Alene. **Officers:** E. V. Boughton, Pres.; F. W. Reed, Sec., both of Coeur d'Alene. **Inc.:** Oct. 29, 1906. **Capital:** 1,000,000 shares; par value \$1; 837,248 shares issued. **Property:** 7 unpatented claims, Hunter dist.; Wallace. **Development:** 3 tunnels: No. 1, 60 ft. long; No. 2, 300 ft. long; No. 3, 800 ft. long. **Ore:** Lead-silver. **Remarks:** An assessment of one-half mill levied June 9, 1922.

STAR MINING CO.

Office: 504 Empire State Bldg., Spokane, Wash. **Officers:** W. J. Wakefield, Pres.; Charles Hussey, Sec., both of Spokane, Wash. **Inc.:** Sept. 17, 1900. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** Star; 15 patented claims, Hunter dist.; Mullan.

STERLING MINING CO., LTD.

Office: Kellogg. **Officers:** John J. Presley, Pres.-Mgr., Kellogg; J. Clarence Presley, Wallace. **Inc.:** Feb. 21, 1903. **Capital:** 1,500,000 shares; par value \$1; 970,000 shares issued. **Property:** 12 unpatented claims, Evolution dist.; Wallace. **Development:** One tunnel, 600 ft. long. **Ore:** Lead-silver. **Remarks:** Assessment work only.

STERLING SILVER MOUNTAIN MINING CO., LTD.

Office: 323 Lindelle Blk., Spokane, Wash. **Officers:** R. L. Brainard, Pres., Kellogg; Matt Baumgartner, Sec., Spokane, Wash. **Inc.:** Oct. 22, 1919. **Capital:** 2,000,000 shares; par value 5c; 1,070,500 shares issued. **Property:** 17 unpatented claims; Big Creek, Evolution dist.; Kellogg. **Development:** Principally by one tunnel, 800 ft. long. **Ore:** Lead-silver. **Men employed:** Average, 4. **Remarks:** A small amount of development work throughout the year, which resulted in exposing a good showing of ore.

STEWART MINING CO.

Office: 1465 Broadway, New York City. **Officers:** J. E. Herrington, Pres.; John L. Williams, Sec., both of New York City. **Inc.:** Sept. 2, 1902; charter forfeited Dec. 1, 1921. **Capital:** 3,000,000 shares; par value \$1; 2,987,362 shares issued. **Property:** Stewart; 8 patented, 4 unpatented claims, Yreka dist.; Kellogg. **Remarks:** Idle since 1917.

SUCCESS MINING CO., LTD.

Office: Wallace. **Officers:** Franklin Pfirman, Pres.; Herman J. Rossi, Sec.; Allen G. Kennedy, Mgr., all of Wallace. **Inc.:** April 7, 1905. **Capital:** 1,500,000 shares; par value \$1; all shares issued. **Property:** Success; 7 patented, 2 unpatented claims, Placer Center dist.; Wallace. **Development:** Principally by 3 tunnels: No. 1, 550 ft. long; No. 2, 1100 ft. long; No. 3, 1500 ft. long; and a vertical shaft 975 ft. deep with 7 intermediate levels. **Plant:** MINE: Electrically driven double drum hoist; 2 electrically driven compressors; complete mining equipment. **MILL:** 200-ton concentrator, including flotation and magnetic separation. **Ore:** Lead-zinc-silver. **Men employed:** Average, 20. **Remarks:** This property was idle for a number of years and in April prospecting was started on the 700 ft. level, No. 3 tunnel. This work encountered a new ore shoot, which was of sufficient size so that immediate production was resumed. The discovery of this new ore shoot was one of the most important developments in the Coeur d'Alene district during the year, and in all probability this old producer will again become one of the principal mines of the district.

SULLIVAN MINING CO.

Office: Wallace. **Officers:** F. W. Bradley, Pres., San Francisco, Calif.; Stanley A. Easton, Sec., Kellogg. **Inc.:** May 22, 1917. **Capital:** 500,000 shares; par value \$3; 37,448 shares issued. **Property:** Lease and bond on property of Star Mining Co. **Remarks:** Owned jointly by the Bunker Hill & Sullivan M. & C. Co. and the Hecla Mining Co. The property owned by this company is the Star mine that adjoins the Morning mine of the Federal Mining & Smelting Co., and which has become famous through extensive litigation. This litigation resulted in favor of the Star Mining Co. and the present owners who immediately proceeded with an extensive campaign to develop the property. The principal undertaking of this was the Star crosscut, the portal of which is at the 2000 foot level of the Hecla mine. This crosscut will be over 8000 feet long when completed and will attain a depth of over 4600 feet where it passes under the divide between Burke and Mullan. Work on this crosscut progressed continuously throughout the year and advanced to a point over 5000 feet from the portal.

SUMMIT MINING & MILLING CO.

Office: Wallace. **Officers:** W. H. Robinson, Pres.; U. D. Dunn, Sec., both of Wallace. **Inc.:** Aug. 21, 1917. **Capital:** 2,000,000 shares; par value 10c; 500,000 shares issued. **Property:** 6 unpatented claims, Placer Center dist.; Wallace. **Ore:** Lead-silver.

SUNRISE MINING CO., LTD.

Office: Wallace. **Officers:** B. G. Worstell, Pres.; O. C. Smith, Sec.-Mgr., both of Wallace. **Inc.:** Nov. 18, 1902. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** Sunrise group; 1 patented, 10 unpatented claims, Beaver dist.; Interstate. **Development:** Total development approximately 3000 ft. of workings, the principal of which is one tunnel 1500 ft. long. **Ore:** Zinc, lead-silver. **Men employed:** Average, 1. **Remarks:** A small amount of work during the year. An assessment of 2 mills levied Aug. 22, 1922.

SUNSHINE MINING CO.

Office: Yakima, Wash. **Officers:** John Sawbridge, Pres.; M. V. Coons, Sec., both of Yakima, Wash. **Inc.:** Jan. 3, 1921. **Capital:** 1,500,000 shares; par value 10c; 1,331,804 shares issued. **Property:** Yankee Boy group; 5 patented, 12 unpatented claims, Yreka dist.; Kellogg. Held under lease and bond from Blake estate and Yankee Girl Mining Co. **Development:** Principal development by 5 tunnels: No. 1, 300 ft. long; No. 2, 300 ft. long; No. 3, 600 ft. long; No. 4, 1100 ft. long; No. 5, 2000 ft. long. **Plant:** MINE: Electrically driven compressor, complete mining equipment, buildings, and camp. MILL: 50-ton concentrator, including fine grinding and flotation. **Ore:** Lead-silver. **Men employed:** Average, 29. **Remarks:** Under the direction of R. S. Merriman this operation was put on a substantial basis and a considerable tonnage of high grade concentrates shipped during the year.

SUNSHINE MINING CO., LTD.

Office: Wallace. **Officers:** Daniel L. McGrath, Pres.-Mgr.; H. J. Hull, Sec., both of Wallace. **Inc.:** Jan. 5, 1907. **Capital:** 2,700,000 shares; par value \$1; 1,564,400 shares issued. **Property:** Sunshine group; 4 patented, 10 unpatented claims, Beaver dist.; Wallace. **Development:** Over 5000 ft. of underground workings. **Plant:** Electrically driven I-R 5-drill compressor; complete mining equipment and camp. **Ore:** Lead-zinc-silver. **Remarks:** Assessment work only.

SYNDICATE MINING & EXPLORATION CO., LTD.

Office: Kellogg. **Officers:** Carl Blomquist, Pres., Wardner; Louis Stevens, Sec., Kellogg. **Inc.:** June 24, 1907. **Capital:** 1,500,000 shares; par value 25c; 1,000,000 shares issued. **Property:** 7 unpatented claims, Evolution dist.; Kellogg. **Development:** Principally by one tunnel, 1300 ft. long. **Ore:** Lead-silver. **Remarks:** An assessment of 1 mill levied Jan. 9, 1922.

TAMARACK & CUSTER CONSOLIDATED MINING CO.

Office: Wallace. **Officers:** Jerome J. Day, Pres.-Mgr.; Harry L. Day, Sec., both of Wallace. **Inc.:** Aug. 6, 1912. **Capital:** Originally 2,000,000 shares; increased to 5,000,000 shares Dec. 28, 1922. Par value \$1; 1,876,288 shares issued prior to the increase. **Property:** Tamarack-Custer; 35 patented, 9 unpatented claims, Lelande and Placer Center dists.; Wallace. **Development:** The two principal tunnels are No. 5, 2950 ft. long; and No. 6, 2600 ft. long. The principal shaft is a three-compartment, vertical shaft, 600 ft. deep. Total development, approximately 8 miles. **Plant:** MINE: 100 h. p. electrically driven hoist; 1300 cu. ft. electrically driven compressor; storage battery haulage on intermediate levels and trolley locomotive haulage on main level. Complete mining equipment. Modern and complete machine shop. Modern hotel, change houses, and camp. MILL: 400-ton concentrator, including flotation. **Ore:** Lead-silver. **Men employed:** Average, 200 since resuming operation. **Remarks:** The property owned by this company is one of the substantial mines of the Coeur d'Alene district and is completely equipped with modern and up-to-date mine and mill plants. Operations were suspended during 1920 and remained so until 1922 when production was resumed. After starting active operations the mine was brought to capacity production as speedily as possible and during the closing months of the year capacity production with a full crew was being maintained.

During the year a right of way through No. 6 tunnel of the Mace group, commonly known as the Mammoth tunnel, owned by the Federal Mining & Smelting Co., was acquired. Electric haulage, a new compressor

and complete mining equipment were installed and active work was started to extend this tunnel into the Tamarack and Custer property. When completed this tunnel will give great additional depth on the Tamarack vein and in the future will be known as Tamarack No. 7 tunnel.

TEDDY MINING & MILLING CO., LTD.

Office: Kellogg. **Officers:** T. R. Mason, Pres.; J. B. Cox, Sec.-Mgr., both of Kellogg. **Inc.:** Dec. 1, 1904. **Capital:** 1,000,000 shares; par value \$1; 770,000 shares issued. **Property:** Teddy group; 9 unpatented claims, Yreka dist.; Kellogg. **Development:** Over 1800 ft. of tunnels, the principal one of which is approximately 800 ft. long. **Ore:** Lead-zinc-silver. **Remarks:** Assessment work only. An assessment of 1½ mills levied June 3, 1922.

TEN TO ONE MINING CO.

Office: 617 Peyton Bldg., Spokane, Wash. **Officers:** Sherman Deery, Pres.; W. W. Johnston, Sec., both of Spokane. **Inc.:** June 2, 1921. **Capital:** 1,000,000 shares; par value 10c; 205,000 shares issued. **Property:** 20 unpatented claims, Summit dist.; Murray. **Development:** 3 tunnels: No. 1, 40 ft. long; No. 2, 50 ft. long; No. 3, 80 ft. long. **Ore:** Lead-copper-gold-silver.

TERRIBLE EDITH

Owner: Wash Snyder, Murray. **Property:** Terrible Edith group; 1 patented, 13 unpatented claims, Summit dist.; Murray. **Development:** Principally by 4 tunnels: No. 1, 100 ft. long; No. 2, 240 ft. long; No. 3, 420 ft. long; No. 4, 1320 ft. long. **Ore:** Lead-silver-zinc. **Remarks:** The owner has been actively engaged in developing his prospect and a few intermittent shipments of ore have been made.

THRONDSOON METALS SAVINGS CO.

Office: Kellogg. **Officers:** Elmer C. Brain, Pres.-Mgr.; J. A. McEachran, Sec., both of Kellogg. **Inc.:** July 28, 1917. **Capital:** 1,000,000 shares; par value 10c; all shares issued. **Property:** 80 acres patented land, 40 acres placer claim; Yreka dist.; Kellogg. **Plant:** MILL: 100-ton flotation; reclaiming river bottom tailings. **Ore:** Lead-zinc-silver.

TRADE DOLLAR MINING CO., LTD.

Office: Wallace. **Officers:** Frank P. Markwell, Pres., Los Angeles, Calif.; Everett H. Pattison, Sec., Long Beach, Calif. **Inc.:** Oct. 18, 1901. **Capital:** 1,000,000 shares; par value 10c; all shares issued. **Property:** Trade Dollar group; 7 patented claims, Lelande dist.; Burke. **Remarks:** An assessment of 1 mill levied Aug. 12, 1922. Idle throughout the year.

TREASURE VAULT MINING CO., LTD.

Office: Wallace. **Officers:** P. J. Maggy, Clerk, Wallace. **Inc.:** Oct. 29, 1906. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** 4 claims, Placer Center dist.; Wallace. **Development:** 290 ft. shaft with 450 ft. of drifts and crosscuts.

TUCKER MINING & MILLING CO.

Office: Wallace. **Officers:** Peter Bahn, Pres.-Mgr.; W. Turner, Sec., both of Wallace. **Inc.:** March 30, 1907. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** Tucker group; 6 unpatented claims, Hunter dist.; Mullan. **Development:** Principally by one tunnel which is 1200 ft. long. **Ore:** Lead-silver. **Remarks:** Assessment work only.

TUSCUMBIA MINING CO., LTD.

Office: Wallace. **Officers:** George May, Pres., Stevensville, Mont.; Morton Webster, Sec., Wallace. **Inc.:** Aug. 14, 1911. **Capital:** 1,500,000 shares; par value 50c; all shares issued. **Property:** 1 patented, 4 unpatented claims, Beaver dist.; Carbonite. **Development:** By 4 tunnels: No. 1, 160 ft. long; No. 2, 80 ft. long; No. 3, 680 ft. long; No. 4, 330 ft. long. **Ore:** Lead-silver. **Remarks:** Assessment work only.

UNITED AMERICAN MINES CO., LTD.

Office: Wallace. **Officers:** Frank P. Markwell, Pres., Los Angeles, Calif.; Everett H. Pattison, Sec., Long Beach, Calif. **Inc.:** Jan. 24, 1908. **Capital:** 3,000,000 shares; par value \$1; all shares issued. **Property:** 2 patented claims, Lelande dist.; Black Bear. **Ore:** Lead-silver. **Remarks:** Idle throughout the year. An assessment of 1 mill levied Dec. 30, 1922.

VIENNA INTERNATIONAL MINING & MILLING CO., LTD.

Office: Wallace. **Officers:** A. H. Featherstone, Pres.; R. A. Marshall, Sec., both of Wallace. **Inc.:** Sept. 10, 1906. **Capital:** 1,500,000 shares; par value \$1; 1,368,146 shares issued. **Property:** Vienna International; 4 patented claims, Placer Center dist.; Wallace. **Development:** Approximately 1300 ft. of tunnels. **Ore:** Lead-silver.

WALLACE MINING, MILLING & REALTY CO.

Office: Wallace. **Officers:** Louis Dahl, Pres., Dixon, Mont.; G. G. Evans, Sec.-Mgr., Wallace. **Inc.:** Nov. 7, 1905. **Capital:** 1,500,000 shares; par value 10c; 1,042,400 shares issued. **Property:** Wallace group; 1 patented, 21 unpatented claims, Placer Center dist.; Wallace. **Development:** Approximately 5000 ft. of tunnels, the principal one of which is 3000 ft. long. **Plant:** Electrically driven Sullivan compressor; Sullivan steel sharpener; complete mining equipment and camp. **Ore:** Lead-silver. **Men employed:** Average, 5. **Remarks:** A large amount of development work done during the year.

WEST BELL MINING CO., LTD.

Office: Wallace. **Officers:** Everett H. Pattison, Sec., Long Beach, Calif. **Inc.:** May 8, 1899. **Capital:** 1,000,000 shares; par value 5c; all shares issued. **Property:** 5 patented claims, Lelande dist.; Black Bear. **Remarks:** Idle throughout the year. An assessment of one-half mill levied Aug. 7, 1922.

WESTCHESTER MINING & MILLING CO.

Office: 614 Riverside Ave., Spokane, Wash. **Officers:** W. W. Papesch, Pres., Kellogg; S. A. Childs, Sec., Spokane, Wash. **Inc.:** Sept. 8, 1916. **Capital:** 1,500,000 shares; par value 10c; 1,305,000 shares issued. **Property:** 14 unpatented claims, Yreka dist.; Kellogg. **Ore:** Lead-silver. **Remarks:** Assessment work only.

WESTERN PACIFIC MINING CO.

Office: Wallace. **Officers:** Alexander Murphy, Pres.; J. Fred Markwell, Sec., both of Wallace. **Inc.:** April 6, 1922. **Capital:** 2,500,000 shares; par value 1c; shares issued, none.

WESTERN UNION MINING CO.

Office: Wallace. **Officers:** D. H. Anderson, Pres., Spokane, Wash.; Ben L. Collins, Sec.-Mgr., Wallace. **Inc.:** Jan. 27, 1916. **Capital:** 2,000,000 shares; par value 10c; all shares issued. **Property:** Western Union; 11 patented, 19 unpatented claims, Evolution dist.; Wallace. **Development:** Principally by 4 tunnels: No. 1, 300 ft. long; No. 2, 750 ft. long; No. 3, 1500 ft. long; No. 4, 5000 ft. long. Total development approximately 13,000 ft. **Plant:** I-R and Gardner-Rix electrically driven compressors; complete mining equipment and camp. **Ore:** Lead-silver. **Men employed:** Average, 10. **Remarks:** For the past few years this property was operated entirely by leasers who were responsible for adding this new producing mine to Shoshone County. Upon the expiration of these leases during the year the company took control of the mine and started an extensive development campaign. A large amount of ore has been exposed and a considerable tonnage shipped. The present condition of this mine indicates that there is no question about this being another new producer.

WEST GEM MINING CO.

Office: Wallace. **Officers:** J. Fred Markwell, Pres., Wallace; Everett H. Pattison, Sec., Long Beach, Calif. **Inc.:** Feb. 1, 1912. **Capital:** 1,250,000 shares; par value 50c; all shares issued. **Property:** 1 patented claim, Lelande dist.; Black Bear.

WEST HECLA MINING CO.

Office: Spokane, Wash., Box 1620. **Officers:** Morton Webster, Pres., Wallace; J. B. Pohlman, Sec., Spokane, Wash. **Inc.:** Feb. 18, 1907. **Capital:** 1,500,000 shares; par value \$1; 1,450,000 shares issued. **Property:** 3 patented claims, Lelande dist.; Burke. **Development:** Principally by one tunnel 1600 ft. long. **Ore:** Lead-silver.

WEST HUNTER MINING CO., LTD.

Office: Mullan. **Officers:** T. B. Cosgrove, Pres.-Mgr., Mullan; C. F. Carmody, Sec., Spokane, Wash. **Inc.:** July 29, 1915. **Capital:** 1,500,000 shares; par value 10c; all shares issued. **Property:** 1 patented, 9 unpatented claims, Hunter dist.; Mullan. **Development:** About 1200 ft. of tunnels. **Ore:** Lead-silver.

WILLOW CREEK MINING CO.

Office: 303 Hyde Bldg., Spokane, Wash. **Officers:** Andrew Hedin, Pres.-Mgr.; John E. Hoppe, Sec., both of Spokane, Wash. **Inc.:** Unknown. **Capital:** 1,500,000 shares; par value 5c; 1,138,000 shares issued. **Property:** 12 unpatented claims, Hunter dist.; Carbonite. **Development:** One tunnel 1240 ft. long. **Plant:** Water driven compressor; complete mining equipment and camp. **Ore:** Lead-silver-copper. **Men employed:** Average, 3. **Remarks:** A small amount of development work done during the year.

WISCONSIN MINING CO.

Office: Kellogg. **Officers:** Louis Bolduc, Pres.-Mgr.; W. O. Straight, both of Kellogg. **Inc.:** March 13, 1913. **Capital:** 1,500,000 shares; par value \$1; 753,000 shares issued. **Property:** Wisconsin group; 4 unpatented claims, Yreka dist.; Kellogg. **Development:** One tunnel 500 ft. long and a vertical shaft 300 ft. deep. **Plant:** Water driven compressor; hoist; and complete mining equipment. **Ore:** Lead-silver. **Remarks:** A small amount of development during the year. An assessment of 3 mills levied March 17, 1922.

WOLVERINE MINING CO., LTD.

Office: White's Hotel, Spokane, Wash. **Officers:** Dennis Sullivan, Pres., Rockford, Wash.; Jerome Herrington, Sec., Spokane, Wash. **Inc.:** Aug. 4, 1909. **Capital:** 1,250,000 shares; par value \$1; all shares issued. **Property:** Wolverine group; 6 unpatented claims, Yreka dist.; Kellogg. **Development:** By 3 tunnels, No. 1, 250 ft. long, No. 2, 400 ft. long; No. 3, 270 ft. **Ore:** Lead-silver.

WONDERFUL MINING CO., LTD.

Office: Wallace. **Officers:** W. H. Holden, Pres., Coeur d'Alene; A. H. Featherstone, Sec., Wallace. **Inc.:** Oct. 15, 1906. **Capital:** 1,500,000 shares; par value \$1; all shares issued. **Property:** Wonderful group; 4 patented claims, St. Joe dist.; Mullan. **Remarks:** Idle for a number of years.

WONDER OF PINE CREEK MINING & MILLING CO., LTD.

Office: Kingston. **Officers:** Edward Hunt, Pres.; A. C. Morbeck, Sec., both of Kingston. **Inc.:** May 7, 1907. **Capital:** 1,500,000 shares; par value 10c; all shares issued. **Property:** 2 unpatented claims, Yreka dist.; Kingston. **Remarks:** Assessment work only.

WYOMING MINING & MILLING CO., LTD.

Office: Wallace. **Officers:** Alfred Page, Pres., Spokane, Wash.; A. W. Hoover, Sec.; Frederick Burbidge, Mgr., both of Wallace. **Inc.:** May 3, 1901. **Capital:** 1,000,000 shares; par value 10c; 935,554 shares issued. **Property:** Wyoming group; 11 patented claims, Yreka dist.; Kellogg. **Development:** Principally by 2 tunnels: Ranger, 2150 ft. long; Wyoming, 500 ft. long. Total development approximately 5400 ft. **Ore:** Lead-zinc-silver. **Remarks:** Idle.

YANKEE GIRL MINING CO.

Office: Kellogg. **Officers:** T. R. Mason, Pres.; J. B. Cox, Sec.-Mgr., both of Kellogg. **Inc.:** March 9, 1916. **Capital:** 1,000,000 shares; par value 1c; shares issued, unknown. **Property:** Yankee Girl group; 10 unpatented claims, Evolution dist.; Kellogg. **Remarks:** Property under lease and bond to Sunshine Mining Co.

YUKON GOLD CO.

Office: 120 Broadway, New York City. **Officers:** William Loeb, Jr., Pres.; W. E. Bennett, Sec., both of New York City; D. H. Ferry, Local Mgr., Murray. **Inc.:** March 19, 1917. **Capital:** 3,500,000 shares; par value \$5; all shares issued. **Property:** Lease on the property of the Coeur d'Alene Mining Co. **Plant:** All steel floating dredge, 106 ft. long, 44 ft. wide, 8 ft. deep, weighs about 1000 tons; all elevating, excavating and treating equipment self-contained on the barge; operated by individual drives. Electrically driven, aggregating about 400 h. p. **Ore:** Placer gold. **Men employed:** Average, 15. **Remarks:** Continuous operation throughout the year. One of the most successful dredges operating in Idaho.

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
American Placer	Summit	Joseph Laveigne	Murray
Amy Matchless	Yreka	G. A. Smith	Kellogg
Anchor et al.	Summit	Mike Melley	Murray
Ancient Gravel Bed	Yreka	George H. Heller	Kellogg
Argentine	Evolution	Coeur d'Alene Hdwe. Co. ½ inter- est White & Bender and Finch & Campbell each ¼ interest	Wallace
Aulbach Group	Eagle	Adam Aulbach	Murray
Bell Group	Lelande	E. A. Moffit	Wallace
Big Four	Hunter	S. A. Tennal	Wallace
Birthday Group	St. Joe	Birthday Min. Co. Wes. J. Horsky	Falcon
Bismark Lode	Eagle	Robert T. Horn Est	Murray
Blackhawk Group	Hunter	Chas. M. Baillie A. A. Hedrick	Mullan
Black Hill	Beaver	John Thiard	Delta
Blue Grouse	Evolution	C. M. Patterson	Wallace
Boulder Placer	Eagle	Clay Giles	Murray
Carruthers Placer	Eagle	E. N. Harwood	Billings, Mont.
Castle Rock et al.	Lelande	A. C. Livingston	Wallace
Comstock Group	Lelande	J. H. Smith	Wallace
Corby Group	Yreka	C. W. Simmons	Kellogg
Cornucopia	Eagle	Francis Frohling	Murray
Daddy Mining Co.		Robert T. Horn	Murray
Dora et al.	Placer Center	Peter McPhillips	Wallace
Eagle Placer	Eagle	Archie Smith	Murray
Eldorado	Summit	R. B. Lundy	Wallace
Eleventh Hour	Evolution	Victor Longley	Osburn
Empress	Beaver	Hugh Mabin	Wallace
Enterprise Group	Yreka	Fred G. Donaldson	Kellogg
Fay et al.	Yreka	Fred G. Donaldson	Kellogg
Ferguson & Davis	Summit	C. B. Ferguson	Murray
Florence Group	Eagle	Frank Rose	Murray
4000 Ft. Slide	Eagle	Clay Giles	Murray
Frances Jeanne	Eagle	W. A. Taylor	Murray
Friday	Beaver	E. M. Smith	Murray
Galena	Lelande	A. W. McCune	200 N. Main St., Salt Lake City, Utah
Gilbert Placer.	Beaver	W. A. Mather	Murray
Gold Back Co.	Eagle	John Docktor	Murray
Gold Circle	Summit	William Wylie	Murray
Gold Creek	Hunter	W. K. Moe	Wallace
Golden Chest	Beaver	Vivian Green	45 W. 34th St. New York City
Golden Gate	St. Joe	A. C. Olson	Superior, Mont.
Great Western & Silver Cord	Summit	Dunlap & Smith	Murray
Highland Chief	Yreka	H. T. Gilbert	Kellogg
Horseshoe Placer	Beaver	Charles H. Wilson	Murray

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Indicator	Yreka	Chas Kaufman	Wallace
Ionia Lode	Summit	Albert Otto	Murray
Jewel Gulch	Evolution	Jasper Allamno	Osburn
Joyce Gr.	Beaver	C. B. Ferguson	Murray
Jumbo Gr.	Eagle	Chas. J. Johnson	Murray
Leroi Gr.	Placer Center	John Guedelhofer Wm. Knoell	Wallace
Liberal King Gr.	Yreka	Leslie Lamb	Kellogg
Little Pittsburgh	Yreka	Gus Smith	Wallace
Lucky Bill Gr.	Eagle	Chas. T. Johnson	Murray
Lucky Boy	Summit	D. A. Finlayson	Murray
Lucky Strike	Summit	M. E. Lewis	Moscow
Mayflower	Hunter	John Foss	Mullan
Midnight	Hunter	Forest Clark	Mullan
Midnight Pl.	Beaver	W. A. Mather	Murray
Morning Star	Eagle	Mike Franks	Murray
Mother Lode	Eagle	John F. Murphy	Murray
Mountain View	Eagle	E. M. Burt	Portland, Ore.
Nellie Potter	Eagle	David Goodman	Murray
Never Sweat	Lelande	John Nadar	Burke
New Road		Gust Lindroos	Wallace
Ninety Seven	Hunter	H. Thompson	Wallace
Old Timber	Eagle	Louis Feldman	Murray
Olympia	Lelande	A. G. Kerns Est.	Wallace
Omaha Group	Lelande	August Paulsen	Spokane, Wash.
Ostrog Gr.	Yreka	N. Petrinovich	Wardner
Paradox	Summit	Charles Nordquist	Murray
Pilot Group	Eagle	John Docktor	Murray
Prudent	Summit	P. R. Kimball	Murray
Sargeant	Evolution	Mrs. Charles Sar- geant	Osburn
Seward Camp	Eagle	James R. Wood	Murray
Sherlock Group	St. Joe	Frank M. Rose	Wallace
Shipka	Eagle	Godfrey Kohl	Murray
Silver Reef	Yreka	Herman J. Rossi	Wallace
Silver Star	Beaver	E. R. Oxley	Murray
Slim Show	St. Joe	Nels Dahlberg	Iron Mountain
Spokane Gr.	Yreka	Robt. F. Schneider	Kellogg
Sunset Group	Beaver	W. A. Clark	Butte, Mont.
Tam O'Shanter	Evolution	David C. Coates	Spokane, Wash.
Terrible Edith	Summit	Wash Snyder	Murray
Toledo Group	Lelande	M. J. Farrell	Burke
Tommy Hawk	Yreka	Alex Vouchard	Kellogg
Troy Group	Hunter	L. E. Hanley	Wallace
Vindicator Group	Yreka	Charles Kaufman	Kellogg
Virgo et al.	Evolution	Sigurd Thorkelson	Wallace
Waddell Group	Summit	Frank Hall	Murray
Wallace Group	Evolution	Jos. Peila	Wallace
Whipsaw Placer	St. Joe	Frank A. Heller	Bonnors Ferry
Wild & Wooley	Beaver	J. A. Prichard	Prichard
Winnie	Eagle	W. M. Smith	Murray
Yankee Group	Evolution	Dennis Blake	Kellogg

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TETON COUNTY

The largest beds of minable coal found in Idaho are located in Teton County. These deposits have been developed in a small way though not sufficiently to prove their number and extent. The beds vary in thickness from 1 to 11 feet, and the coal is of high quality, excellent for domestic and industrial purposes, and is exceptionally adaptable for powdered coal. These deposits have been examined by members of the U. S. Geological Survey; and the U. S. Bureau of Mines, in cooperation with the University of Idaho, and their reports contain estimates of an immense tonnage of available coal.

For a number of years a small amount of coal has been produced for local consumption, and during the war a branch railroad 7 miles in length was constructed to the mine. At that time the property was actively operated, but owing to mismanagement the development work done was of no practical value and the mines were forced to close down. During 1921 the Gem State Coal Co. commenced active operations under a lease, but in 1922 the bondholders brought foreclosure proceedings which resulted in the lease being cancelled.

When these coal properties are properly financed and managed they will become of great economic importance in the development of southern Idaho.

The other mineral resources of this county are phosphate rock, gold, tripoli and bentonite. These are worthy of investigation as well as the many structures favorable for the accumulation of commercial oil which are also found in this county.

The coal deposits and oil possibilities are fully described in the references listed under "Bibliography."

GEM STATE COAL CO.

Office: Driggs. **Officers:** H. S. Wales, Pres.-Mgr., Driggs; D. C. Coates, Sec., Seattle. **Inc.:** Oct. 15, 1921. **Capital:** 50,000 shares; par value \$10; 20,017 shares issued. **Property:** Lease on property of Idaho Coal Mines Co. **Remarks:** During the year the bondholders of the Idaho Coal Mines Co. brought foreclosure proceedings. These proceedings compelled cancellation of the lease and suspension of operations by this company.

IDAHO COAL MINES CO.

Office: Driggs. **Officers:** R. S. Talbot, Pres., Seattle; H. S. Wales, Sec.-Mgr., Driggs. **Inc.:** Oct. 9, 1918. **Capital:** 20,000 shares; par value \$20; 18,102 shares issued. **Property:** 920 acres patented land; Driggs. **Development:** By one tunnel 500 ft. long and an inclined shaft 500 ft. long. Total development, approximately 10,000 ft. **Plant:** Steam driven hoist and compressor. **Mineral sought:** Coal. **Remarks:** Foreclosure proceedings by bondholders compelled the property to remain in idleness throughout the year.

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TWIN FALLS COUNTY

The gold found in the placer deposits of Snake River is the principal mineral resource of Twin Falls County. These deposits are worked in a limited manner and generally return the operator a good profit on his labor.

Sandstone suitable for building purposes is found in a number of places in this county, and in the southern end a small amount of prospecting for the rare metals has been done.

CEDAR CREEK CONSOLIDATED MINING CO.

Office: Buhl. **Officers:** Arthur A. Diegel, Pres.-Mgr.; Frank A. Eveleth, Sec., both of Buhl. **Inc.:** Dec. 4, 1920. **Capital:** 10,000 shares; par value \$1; 7000 shares issued. **Property:** 7 unpatented claims on Cedar Creek; unorganized dist.; Rogerson. **Development:** Approximately 100 ft. of workings. **Remarks:** In addition to doing assessment work new buildings were erected and a road a mile and one-half long was built to the mine.

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Bonanza Placer	Snake River	Everett Sweeley	Twin Falls
Ether Placer	Snake River	W. S. Fairchild	Buhl
Homestake Placer	Snake River	J. W. Eaton	Twin Falls
Juniper Placer	Snake River	A. C. Urle	Twin Falls
Klondyke Placer	Snake River	H. E. Baylor	Twin Falls
Pleasant Side Pl.	Snake River	Wm. Frisch	Twin Falls

VALLEY COUNTY

The new highway from Cascade to Yellow Pine which has been under construction for the past two years by the U. S. Forest Service and which will eventually be extended into the Thunder Mountain district, is one of the most important road projects instituted by the Forest Service in the State of Idaho, as this road, when completed, will open up and make available for recreation and exploitation one of the largest isolated areas in the United States. The hot springs, the virgin hunting and fishing grounds, and the unexcelled scenic beauties of this section will attract tourists and sportsmen and draw much travel into and center attention upon this vast unexplored and unprospected mineralized district.

The most important metals found in the county named in the order of their prominence are: mercury, gold (placer and lode), silver, antimony, copper, lead, zinc, tungsten, molybdenum, mica and monazite. Some of the deposits carrying these minerals have been developed in a small way, but isolation and lack of transportation have always prevented profitable operation, so the deposits have never received the attention that they merit.

The mineral resources of this county present many opportunities both to prospectors and development companies and when properly exploited will add greatly to the prosperity of Valley County and the State.

BETHLEHEM MINES CORPORATION

Office: 631 Chamber of Commerce Bldg., Portland, Ore. **Officers:** George D. Beveridge, Pres.; O. A. Neal, Sec., both of Portland, Ore. **Inc.:** Aug. 16, 1922. **Capital:** 2,500,000 shares; par value 10c; 1,267,000 shares issued. **Property:** 5 unpatented claims, Big Creek dist.; Yellow Pine.

DEADWOOD MINING CO., LTD.

Office: Boise. **Officers:** James H. Hawley, Pres.; M. I. Church, Sec.-Treas., both of Boise. **Inc.:** June 10, 1921. **Capital:** 1,000,000 shares; par value 10c; 303,420 shares issued. **Property:** Deadwood group; 8 unpatented claims, Deadwood dist.; Knox. **Development:** By one tunnel, 350 ft. long. **Ore:** Lead-silver. **Men employed:** Average, 2. **Remarks:** A small amount of development work during the year.

GOLD FORK MINING CO.

Office: 218 N. Eighth St., Boise. **Officers:** W. E. Pierce, Pres.; J. H. Richards, Sec., both of Boise. **Inc.:** Jan 18, 1916. **Capital:** 2000 shares; par value \$100; all shares issued. **Property:** 1480 acres patented placer ground; Gold Fork dist.; Roseberry. **Ore:** Placer gold. **Remarks:** Idle throughout the year.

GOLD FORK PLACER MINING CO.

Office: Boise. **Officers:** W. H. Shane, Pres, Emmett; J. F. Cook, Sec., Boise. **Inc.:** July 21, 1920. **Capital:** 25,000 shares; par value \$1; 13,503 shares issued. **Property:** 3 unpatented placer claims, Gold Fork dist.; Donnelly. **Plant:** Two-mile ditch; 500 ft. of pipe and hose and complete hydraulic equipment. **Ore:** Placer gold. **Remarks:** Operated during the high water season.

HALL INTERSTATE MINING CO.

Office: 610 Overland Bldg., Boise. **Officers:** James H. Hawley, Pres.; Charles W. Mack, Sec., both of Boise. **Inc.:** Oct. 30, 1915. **Capital:** 400,000 shares; par value 25c; shares issued, unknown. **Property:** Hall Bros.; 5 unpatented claims, Deadwood dist.; Knox. **Remarks:** Assessment work only.

HOLCOMB CO., LTD.

Office: 610 Overland Bldg., Boise. **Officers:** Fred W. Holcomb, Pres.-Mgr.; Charles W. Mack, Assistant Sec., both of Boise. **Inc.:** April 20, 1908. **Capital:** 500,000 shares; par value \$1; 317,622 shares issued. **Property:** 16 patented claims, Thunder Mountain dist.; Yellow Pine. **Ore:** Gold.

INDEPENDENCE MINES & POWER CO.

Office: Topeka, Kan. **Officers:** W. H. Davis, Pres.; L. Biscoe, Acting Sec., both of Topeka, Kan. **Inc.:** April 27, 1906. **Capital:** 500,000 shares; par value 5c; 250,000 shares issued. **Property:** 10 patented claims, Big Creek dist.; Yellow Pine. **Development:** By one tunnel 500 ft. long. **Ore:** Copper-silver-gold. **Remarks:** Idle for many years.

LOST PILGRIM MINING CO.

Office: 610 Overland Bldg., Boise. **Officers:** James H. Hawley, Pres.; Charles W. Mack, Sec.; A. E. Robinson, Mgr., all of Boise. **Inc.:** Nov. 22, 1921. **Capital:** 600,000 shares; par value \$1; 300,000 shares issued. **Property:** Lost Pilgrim group; 6 unpatented claims, Deadwood dist.; Knox. **Development:** By 2 tunnels: No. 1, 120 ft. long; No. 2, 600 ft. long; and a vertical shaft 40 ft. deep. Total development, approximately 1500 ft. **Ore:** Silver. **Men employed:** Average, 1. **Remarks:** A large amount of development work, which further proved the extent of the ore, was done during the year.

PROBIGLO MINES CO.

Office: 517 Idaho Bldg., Boise. **Officers:** Isaac P. Miller, Pres., 745 Hoyt St., Portland, Ore.; McKeen F. Morrow, Sec., Boise; H. T. Abstein, Mgr., Yellow Pine. **Inc.:** Feb. 11, 1913. **Capital:** 200,000 shares; par value \$1; 100,000 shares issued. **Property:** Mascot group; 7 unpatented claims, Big Creek dist.; Yellow Pine. **Development:** About 200 ft. of tunnels. **Ore:** Silver-gold. **Remarks:** Assessment work only.

PROSPECTORS MINING & DEVELOPING CO., LTD.

Office: Meyers Cove. **Officers:** John R. Clark, Pres., Escalon, Calif.; Homer I. Clark, Sec.-Mgr., Meyers Cove. **Inc.:** April 12, 1906. **Capital:** 50,000 shares; par value \$1; 26,725 shares issued. **Property:** Golden IbeX group; on Wilson Creek; Thunder Mountain dist.; Meyers Cove. **Development:** Approximately 500 ft. of workings, the principal one of which is a tunnel 125 ft. long. **Ore:** Gold. **Men employed:** Average, 1. **Remarks:** Continuous operation throughout the year by the secretary.

RETALLAC MINING CO.

Office: Seattle, Wash., Box 1221. **Officers:** Fenton Merrill, Pres., Seattle, Wash.; Paul DeHaas, Sec., Portland, Ore. **Inc.:** Unknown. **Capital:** 5000 shares; par value \$1; all shares issued. **Property:** 2 unpatented claims, Yellow Pine dist.; Yellow Pine. **Ore:** Gold. **Remarks:** Assessment work only.

UNITED MERCURY MINES CO.

Office: 602 Overland Bldg., Boise. **Officers:** J. J. Oberbillig, Pres.-Mgr., Boise; Mary H. Bruce, Sec., The Farragut, Washington, D. C. **Inc.:** Jan. 20, 1921. **Capital:** 5,000,000 shares; par value 10c; 3,500,620 shares issued. **Property:** 97 unpatented claims, Yellow Pine dist.; Yellow Pine. **Development:** Approximately 3500 ft. of tunnels and cuts, the principal of which are 5 tunnels, 600 ft., 300 ft., 200 ft., 135 ft., and 130 ft. respectively. **Plant:** A 6 cylindrical tube retort. **Ore:** Mercury, gold, silver, lead, and antimony. **Men employed:** Average, 11. **Remarks:** During the year this company completed its camp, erected a reduction plant, and carried on an extensive mine development campaign. A large tonnage of ore has been exposed.

WEST MOUNTAIN MINING CO.

Office: 329 Yates Bldg., Boise. **Officers:** John Alden, Pres.; H. A. Alden, Sec., both of Boise. **Inc.:** March 8, 1922. **Capital:** 1,000,000 shares; par value 1c; 535,774 shares issued. **Property:** Silver Bell group; 6 unpatented claims, West Mountain dist.; Cascade. **Development:** By two tunnels: No. 1, 40 ft. long; No. 2, 200 ft. long. **Ore:** Lead-silver-gold. **Men employed:** Average, 2. **Remarks:** This company has an encouraging prospect, and maintained development work throughout the year.

YELLOW PINE DEVELOPMENT CO., LTD.

Office: Room B, Exchange Bldg., Portland, Ore. **Officers:** Charles M. Trinler, Pres.; Ednah M. Trinler, Sec., both of Portland, Ore. **Inc.:** Sept. 20, 1905. **Capital:** 10,000 shares; par value \$100; 3940 shares issued. **Property:** 4 unpatented placer claims; Yellow Pine dist.; Yellow Pine. **Ore:** Placer gold.

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Baker Pl.	Deadwood	Wm. Baker	Cascade
Dewey	Thunder Mountain	R. A. Davis, Jr.	Nampa
Ellis Gr.	Deadwood	Jas. Ellis	Knox
Gold Reef	Deadwood	Edw. Moran	Knox
Gold Ridge	Big Creek	H. B. Abstein	Yellow Pine
Golden Gate Gr.	Yellow Pine	Mark Campbell	Yellow Pine
.....	Edwardsburg	Goldman & McRae	McCall
Hard Rock Gr.	Deadwood	Clay Kalfus	Knox
Independence Gr.	West Mountain	Jas. Maloney	Cabarton
Independence	Edwardsburg	J. B. Eldridge	Boise
Keystone Gr.	Deadwood	Mitchell Jeannott	Pioneerville
Lake City Pl.	Lake City	Jacob Storer	McCall
Lucky Strike	West Mountain	D. G. Kain	Cascade
.....	Edwardsburg	Laufer & Davis	Yellow Pine
Merry Blue	Deadwood	Henry A. Vernon	Boise
.....	Edwardsburg	Wm. Mitchell	Meyers Cove
.....	Edwardsburg	Mattie Mahan	Clover
Pathfinder Gr.	Profile	Crosby Brewer	Warren
Profile Gap Gr.	Profile	Sam Wilson	Yellow Pine
Ramey Ridge	Edwardsburg	James Hand	Clover
Red Metal	Profile	Charles Ellison	Yellow Pine
Ruby Hill	Lake City	L. L. Alsager	Emmett
Silver Shield	Hurdy Creek	Charles Hardin	Cabarton
Smith Cr. Gr.	Edwardsburg	John Routsen	Warren
Snow Shoe	Big Creek	Jacob Jensen	Clover
Stella	Profile	D. G. Kain	Cascade
Sunday	Edwardsburg	Wm. A. Edwards	Yellow Pine
Sunnyside	Thunder Mountain	Dan McRae	McCall

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WASHINGTON COUNTY

This county has two districts in which considerable mining has been done—Washington and Heath—the principal one being the Washington or Mineral district. At one time this district was a large producer of silver, two blast furnaces were in operation and the camp of Mineral was a good sized town; but the town has been deserted for many years, the smelters have been dismantled and the camp reverted to its primitive condition. Practically all of the deposits are high grade silver-copper ores, rather complex, but amenable to modern metallurgical methods. Many of the deposits are extensive, a considerable tonnage of ore is available, and there seems to be no reason why this district should not be receiving more attention than it has during the past two years, as there are many properties that are worthy of investigation and development.

The ores of the Heath district are principally copper. When copper demanded a high price this district received considerable attention, but when the mining of this metal became unprofitable all activities were suspended and during 1922 no active operation was resumed.

The principal minerals found in the county mentioned in the order of their prominence are: silver, copper, gold, lead, zinc, iron ore, manganese, diatomaceous earth and clay. Many of the deposits carrying these minerals warrant greater attention than they have received in the past.

BANNER MINING CO. OF IDAHO, LTD.

Office: Heath. **Officers:** Henry Raymond, Pres.-Mgr.; Paul Raymond, Sr., Sec., both of Heath. **Inc.:** June 20, 1908. **Capital:** 1,000,000 shares; par value \$1; all shares issued. **Property:** Banner group; 3 unpatented claims, Heath dist.; Heath. **Development:** By two tunnels: No. 1, 200 ft. long; No. 2, 800 ft. long. **Ore:** Copper-silver-gold. **Remarks:** Assessment work only.

IDAHO CLAY PRODUCTS CO.

Office: Weiser. **Officers:** J. Kelch, Pres., Boise; Stuart M. French, Sec.-Mgr. **Inc.:** Feb. 16, 1921. **Capital:** 25,000 shares; par value 10c; 411 shares issued. **Property:** Approximately 600 acres near Weiser. **Mineral sought:** Clay suitable for brick, tile and building material.

IDAHO-OREGON COAL MINING CO.

Office: Boise. **Officers:** A. E. Price, Pres.; A. Affleck, Sec.-Treas., both of Boise. **Inc.:** Nov. 5, 1920. **Capital:** 100,000 shares; par value \$1; 70,000 shares issued. **Property:** Government coal prospecting permit on 1200 acres near Cobb Siding; Weiser. **Development:** Principally by one tunnel approximately 800 ft. long. **Mineral sought:** Coal. **Remarks:** Idle throughout the year.

NAME OF MINE	MINING DIST.	OWNER	P. O. ADDRESS
Black Hawk Gr.	Washington	Ladd Metal Co.	Portland
Blue Jay	Washington	Capt. G. H. Schumacher	U. S. A. Q. M. Corps, Edgewood Arsenal, Md.
Contact	Heath	A. Houlahan	Brownlee, Ore.
Copper Bell Gr.	Washington	J. R. Weaver	Home, Ore.
Darius Gr.	Washington	Mrs. J. G. Burnham	Home, Ore.
Edna May	Heath	Roy Howland	Homestead, Ore.
Egan Gr.	Washington	Emil Melzer	Baker, Ore.
Enterprise Gr.	Washington	Shane & McCorkel	Home, Ore.
Fremont Gr.	Heath	M. K. Straight	Heath
Galena Silver	Heath	I. A. Vaughn	Council
Iron Mt. Gr.	Washington	John Sigwine	Weiser
Jessie Gr.	Washington	John Flynn	Home, Ore.
Last Chance	Washington	W. W. Campbell	Weiser
Magdalene Gr.	Washington	J. R. Weaver	Home, Ore.
Monarch	Heath	Rudolph Brown	Heath
North Star	Washington	Mrs. J. G. Burnham	Home, Ore.
Raymond	Heath	Paul Raymond, Sr.	Heath

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COMPANIES FAILING TO FILE ANNUAL REPORT

COMPANY NAME	OFFICER	P. O. ADDRESS
Alameda Mng. Co.	Jas A. Wayne	Wallace
Amalgamated Sugar Co.	J. F. Ellis	Ogden, Utah
Ambergris Mng. Co.	P. J. Maggy	Wallace
American Mng. & Dev. Co.	Hugh Roberts	Carmen
American M. & M. Co.	E. W. Johnson	Boise
Archbold Mines Inc.	D. V. Archbold	Mackay
Arctic M. & M. Co., Ltd.	George H. Heller	Kellogg
Argentine Leasing Co.	Milton W. Emmett.....	Kellogg
Bear Creek Gold M. Co., Ltd.	Martin King	La Grande, Ore.
Bear Creek Mng. Co.	J. F. Morton	Wallace
Black Eagle Gold M. Co.	Boone Jenkins	Joplin, Mo.
Brady Development Co.	Patrick Brady	Wallace
Bunker Chance M. Co.	Nickodem Petrinovich.....	Wardner
Capital M. & M. Co.	Joseph F. Whelan	Wallace
Coeur d'Alene Antimony M. Co., Ltd.....	C. M. Powell	Kellogg
Coeur d'Alene Exploration Co., Ltd.....	F. Bland	Wallace
Coeur d'Alene Vulcan M. Co.	Edward Felshow	Clintonville, Waupaca Co., Wisconsin
Collinwood Mining Co.	J. C. Northrup	Palouse, Wash.
Comet Gold & Copper M. Co., Ltd.....	Joseph F. Whelan	Wallace
Comstock Copper M. Co.	J. H. Nordquist	Wallace
Constitution M. & M. Co.	B. H. Kizer	Spokane, Wash.
Continental Gold Mines Co.	H. T. Albertson	Baker
Crescent M. & M. Co.	Dennis P. Woods	Spokane, Wash.
De Lamar M. & M. Co.	J. A. Ames	Boise
Dixie Mining Co.	John R. Wyman	Boise
Eagan Copper M. Co.	L. L. Brainard	Wallace
Eagle Creek Gold M. Co.	R. E. Dunlap	Wallace
East Caledonia Mines Co.	Franklin Pfirman	Wallace
Echo Mining Co., Ltd.	O. A. Olin	Wallace
Enterprise Mining Co.	W. A. Tuson	Kellogg
Equator Gold M. & M. Co.	C. E. Sample	Cusick, Wash.
Equitable M. & M. Co.	G. R. Scott	Coeur d'Alene
Eureka M. & M. Co., Ltd.	A. D. Marshall	Wallace
Falls Creek Mining Co.	Wm. Hollembaek	Sandpoint
Fern Quicksilver M. Co.	J. A. Marks	Boise
Fidelity Co., Ltd.	Allan G. Kennedy	Wallace
Five Bars M. Co., Ltd.	E. W. Watters	Boise
Florence Silver Mines Co. ....	.....	Boise
Flynn Group Mining Co.	Joseph F. Whelan.....	Wallace
Golden Rule Mines, Ltd.	W. B. Horn	Salmon City
Gold Hill M. & M. Co. ....	.....	Harvard
Gold Zone M. & M. Co., Ltd.	F. Van Deventer	Grangeville
Grangeville Coal & Dev. Co.	George A. Smith	Grangeville
Great Northwestern Mng. Co.	Harris O. Solum	Wallace
Great Western M. Co., Ltd.	Jesse Norton	Duluth, Minn.
Heath Mng. & Dev. Co. ....	.....	Weiser
Hennessy-Burns Mining Co.	Joseph F. Whelan	Wallace

COMPANY NAME	OFFICER	P. O. ADDRESS
Hermit Mining Co.	Henry L. Carpenter	407 S. 10th St., Minneapolis, Minn.
Idaho Carbonate Hill Cons. M. Co.	A. W. Witherspoon	403 Peyton Bldg., Spokane, Wash.
Idaho Consolidated Placer M. Co.	J. Edward Matson	18 S. Dearborn St. Chicago, Ill.
Idaho Exploration & Dev. Co.	J. M. McBride	N. 25th St., Boise
Idaho Mines & Metals Co., Ltd.	Frank T. Day	McAlpin Hotel, New York City
Idaho Sierra Nev. Mng. Co.		Kellogg
Idaho Standard Mines Co.	J. H. Richards	Boise
Independent Dev. Co.	W. A. Smith	Wallace
International Portland Cement Co.	Chas. F. Sechrist	Spokane, Wash.
Ione Mining Co.		Wallace
Keep Cool Mng. Co.		
King Solomon's Mines Co.	Wm. Hollembaek	Sandpoint
La Fleur-St. James M. Co.	M. A. Rodman	Colville, Wash.
Lemhi Mines Co., Ltd.	Otis M. VanTassel	St. Anthony
Lewis & Clark M. Co.	J. R. Bean	Mullan
Marsh Basin Oil & Gas Co.	Charles O. Dumas	Albion
Melcher M. & M. Co.	R. M. Wilkinson	Salt Lake City
Mount Hydman Mines Dev. Co.	L. P. Pearman	Bruneau
Mount Marshall Mines, Ltd.	Geo. A. Wales	Burgdorf
Murray Gold Syndicate	Torkelson	Wallace
Nevada-Stewart M. Co.	Charles R. Mowery	Wallace
New Caledonia Cons. M. Co.	Milton W. Emmett	Kellogg
Old Bonaparte M. & Dev. Co.	Rupert Winters	Featherville
Old Spanish Town Mines Co.	W. D. Ebbert	Rocky Bar
Old Veteran Mining Co.	L. L. Brainard	Wallace
Parker Mining Co., Ltd.	J. M. Stevens	Pocatello
Patuxent Mining Co.	Donald A. Callahan	Wallace
Pioneer Oil, Gas & Pipe Line Co.	Ben H. Jackson	Lewiston
Pittsburgh & Idaho M. & M. Co., Ltd.	Daniel Laverty	Pardee
Precious Metal Mines Co.	R. C. Dugdale	Silver City
Quartz Creek Gold Dredging Co.	Alex Kasberg	Lewiston
Raven Mining Co., Ltd.	Franklin Pfirman	Wallace
Red Elephant Cons. Mines Co.	Edwin J. Webb	114 Main St., Beacon, N. Y.
Red Rose Gold Mines Co.	J. J. Oberbillig	Boise
Rescue Gold Mines Co.	George H. Frost	239 S. Madison Ave., Pasadena, Calif.
Rocky Canyon M. & M. Co.		Sandpoint
Sabina Mines Co.	E. J. Duff	Wallace
Saint Louis & Idaho M. & M. Co.	I. S. Collins	Box 925, Spokane, Wash.
San Francisco Chemical Co.	R. A. Sullivan	Montpelier
Sherman Development Co.	Harry R. Allen	Wallace
Sinker Tunnel M. Co.	W. G. Adams	Nampa
Sisters Leasing Co.	A. G. Kennedy	Wallace
Snow Storm Silver Lead Co.	Therrett Towles	Wallace
Snowy Peak Mining Co.	John H. Wourms	Wallace

COMPANY NAME	OFFICER	P. O. ADDRESS
Tacoma Dredging Co.	Otto A. Roeder	Lewiston
Terry Corporation	E. C. Rowdon	Blackfoot
Torino Mining Co.	Joseph F. Whelan	Wallace
Tri-Metals Milling Co.	J. Benj. Parker	Kellogg
United States Silver-Lead Mines Co.	Jos. McCarthy	Spokane, Wash.
Utah Bellevue Mines Co.	J. H. Saxman	Salt Lake City
Utah-Idaho Sugar Co.	D. B. Pratt	Salt Lake City
Venus Mining Co.		Wallace
Verda-May Mng. Co.	Walter H. Hanson.....	Wallace
Virginia Mining Co,	Joseph F. Morton.....	Wallace
Wallace Mining Co.	D. C. McKissick	Wallace
Wampum Mining Co.	Franklin Pfirman.....	Wallace
War Dance Mining Assn.	Andrew Prader	Hailey
Wardner Leasing Co.	J. D. Owen	Kellogg
Waverly Mining Co.	R. H. Salter	Lewiston
White Knob Mining Co.	D. D. Muir	911 Newhouse Bldg., Salt Lake City

MISCELLANEOUS MINERALS

COMPANY OR MINE	OWNER OR OFFICER	POST OFFICE	COUNTY
ANTIMONY			
Buzzwhizzer	I. A. Brim.....	Arco	Butte
Coeur d'Alene Antimony Min. Co., Ltd.....	C. M. Powell, Sec.....	Kellogg	Shoshone
United Mercury Mines Co.....	J. J. Oberbillig, Pres.....	Boise	Valley
	Albert Hennessy.....	Yellow Pine	Valley
ASBESTOS			
Western Mineral Co.....	Geo. H. Watterman, Mgr.....	Kamiah	Idaho
BARYTES			
Barium Group.....	Frank Lee.....	1301 Hayes St., Boise.....	Blaine
Barytes Rare Mineral Mfg. Co.....	John H. Ware, Pres.....	224 Puget Sound Bldg., Tacoma, Wash.	Blaine
Bonnie Group.....	Bunker Hill & Sullivan M. & C. Co.....	Hailey	Blaine
BAUXITE			
Mink Creek.....	S. Allsworth.....	557 S. 4th St., Pocatello.....	Bannock
COBALT			
Beliel Group.....	Haynes-Stellite Co.....	Kokomo, Ind.	Lemhi
Copper Chief M. & M. Co., Ltd.....	Robert Olson, Pres.....	Troy	Latah
Home Builder Min. & Dev. Co., Ltd.....	Frank M. Slagle, Pres.....	528 Hutton Bldg., Spokane, Wash.	Kootenai

COMPANY OR MINE	OWNER OR OFFICER	POST OFFICE	COUNTY
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DIATOMACEOUS EARTH

Insulation Mfg. Co.....	Gordon T. Hyde, Mgr.....	612 Templeton Bldg.....	Camas
		Salt Lake City, Utah.....	Elmore
	Frank Halford.....	Mountain Home	Elmore

LIMESTONE

Amalgamated Sugar Co.....		Salt Lake City, Utah.....	Butte
International Portland Cement Co.....	Chas. F. Sechrist, Sec.....	Spokane, Wash.	Bonner
Utah-Idaho Sugar Co.....		Salt Lake City, Utah.....	Butte
Washington Brick, Lime & Sewer Pipe Co.....		Spokane, Wash.	Bonner

MANGANESE

Hub Group.....	S. O. Nelson.....	1211 E. Bannock St., Boise.....	Butte
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MARBLE

Fairchild & Bedke.....	Basin	Cassia
Ben L. Schultz.....	Lewiston	Nez Perce
John Lambert.....	Lewiston	Nez Perce

MICA

Mica Queen Group.....	A. H. Bentz.....	Avon	Latah
Muscovite Mica Mine.....	M. L. Gifford.....	Council	Adams
Pacific White Mica Co.....	W. C. McAllister, Pres.....	534 N. Y. Bldg.,	Latah
		Seattle, Wash.	
Rinehart Group.....	Gillman Rinehart.....	Council	Adams
Washington Mica Co.....	George H. Doerr, Sec.....	Spokane, Wash.	Latah

MISCELLANEOUS MINERALS

COMPANY OR MINE	OWNER OR OFFICER	POST OFFICE	COUNTY
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MOLYBDENUM

W. G. Cadby.....	Warren	Idaho
W. R. Deckard.....	Pine	Elmore
A. J. Kent.....	Bonners Ferry	Boundary
A. R. Mulkey.....	Leadore	Lemhi
N. H. Redient.....	Port Hill	Boundary
Mack Rheinboldt.....	Pine	Elmore

OIL AND GAS

Goose Creek Oil & Dev. Co.....	D. P. Carpenter, V. Pres.....	Pittsburgh, Pa.	Cassia
Idaho Oil & Gas Co.....	C. A. Glougie, Pres.....	Nampa	Payette
Idaho Research & Dev. Co., Inc.....	George Stoll, Sec.....	Pocatello	Power
Marsh Basin Oil & Gas Co.....	Charles O. Dumas, Pres.....	Albion	Cassia
Tammany Oil Co.....	V. F. Lorang, Pres.....	Lewiston	Nez Perce
Wallace-Wyoming Oil Co.....	Ben H. Jackson, Mgr.....	Pocatello	Caribou

PHOSPHATE

American Phosphate Corporation.....	C. F. Nibley, Pres.....	722 Kearns Bldg., Salt Lake City, Utah	Bear Lake
Anaconda Copper Co.	C. E. Nighman, Mgr.....	Conda	Caribou
Bear Lake Phosphate Co.....	Russell Shepherd, Pres.....	Paris	Bear Lake
Idaho Phosphate Co.....	Ray C. McIlwee.....	Paris	Bear Lake
San Francisco Chemical Co.....	Matt Miller, Trustee.....	Cavanaugh	Bear Lake
	Joseph J. Taylor, Supt.....	Montpelier	Bear Lake
	William F. Kelt, Pres.....	332 Pine St., San Francisco, Calif.	Caribou
Southern California-Orange Grove Fertilizer Co.....	Robert J. Shields, Mgr.....	Salt Lake City, Utah	Caribou
U. S. Phosphate Co. of Michigan.....	H. F. Chaney, Sec.....	1724 Ford Bldg., Detroit, Mich.	Bear Lake
Utah Fertilizer & Chemical Mfg. Co.....	Robert J. Shields, Mgr.....	Salt Lake City, Utah	Bear Lake

COMPANY OR MINE

OWNER OR OFFICER

POST OFFICE

COUNTY

QUICKSILVER

Fern Quicksilver Mng. Co.....	J. A. Marks, Pres.....	Boise	Valley
United Mercury Mines Co.....	J. J. Oberbillig, Pres.....	Boise	Valley

RUTILE

Edward Thenon.....	Kooskia	Idaho
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SALT

Jesse Draney.....	Auburn, Wyo.	Caribou
John McGrew & Co.....	Auburn, Wyo.	Caribou
John W. Booth.....	Fairview, Wyo.	Caribou

SANDSTONE

Boise Stone Co.....	Thomas McMillan.....	Boise	Ada
Idaho State Penitentiary.....	Warden	Boise	Ada

TUNGSTEN

Golden Chest.....	E. M. Smith.....	Murray	Shoshone
Hub Group.....	S. O. Nelson.....	1211 E. Bannock St., Boise.....	Butte
Kennan	Chester T. Kennan.....	Murray	Shoshone
Mother Lode	John F. Murphy.....	Murray	Shoshone
Republic Con. Mng. & Ref. Co.....	W. P. Barton, Sec.....	Patterson	Lemhi
Tungsten Hill Mng. Co.....	C. D. Muxen, Sec.....	Symons Bldg., Spokane, Wash.	Boundary
Unity Gold Mines Co.....	Jay A. Czizek, Mgr.....	Warren	Idaho

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1922 METAL PRODUCTION

The total value of all lead, silver, gold, copper and zinc mined and marketed in Idaho during 1922 was \$19,196,403.71, an increase in value of \$2,632,389.12 over the production of 1921 which was \$16,564,014.59. The production of copper and zinc had a decided increase; gold decreased; lead and silver remained about the same although slightly less as the reopening of the large mines, which were idle during 1921, and the increase in production by those which continued operations, was not sufficient to overcome the deficiency caused by the curtailed output during the first six months of the year.

The advances in the price of lead, zinc and copper; the reduction in freight rates and commodities; and an improved labor situation were responsible for the resumption of operations by all of the mines which were idle during 1921. The Pitman act greatly stimulated the production of silver and was entirely responsible for the continuous operation of many large producers. Gold mining continued to be unprofitable and unless some relief is had in the near future the only gold of any consequence produced in Idaho will be that contained in the ores of lead and copper. Shoshone county maintained its position as the premier producing county in the State, with a total production valued at \$16,182,010.61 or 84.29 per cent of the total State production. Blaine County, which was the second largest producer in 1921 lost its position in 1922 to Custer County by a margin of \$39,853.20, so takes third place for this year. Lemhi County, the fourth in rank in 1921 lost its position to Bonner County and went into fifth place with Boundary County as sixth. The increase in Bonner County is attributed principally to the operations of the Talache Mines, Inc., and the increase in Boundary County to the resumption of The Idaho Continental Co.

Gold

The 1922 output of gold totaled 22,178.39 ounces valued at \$458,427.32. In 1921 the output was 26,750.76 ounces valued at \$552,938.23; or a loss of \$94,410.91. This is the least production ever recorded in the history of the State and is significant in emphasizing the lethargy in gold mining that existed throughout the year. Particularly so as a large part of the production was recovered as a by-product of other metals. Boise County continued to hold first rank in gold production with Shoshone County second, although both had a considerable decrease, while the operations of the new dredges in Elmore and Clearwater Counties added two new sources of production.

Silver

The 1922 production of silver was 6,149,336.15 ounces and in 1921 it was 6,184,989.73 ounces; a decrease of 35,654 ounces. The 1922 silver production of Shoshone County was 4,697,517.74 ounces, 76.39 per cent of the total for the State, and a decrease of 434,802 ounces as compared with 1921. Blaine was the only other county to show a decrease while Bonner and Custer recorded a marked increase. The principal silver producing counties, for the year, mentioned in the order of their prominence are Shoshone, Blaine, Bonner, Custer, Lemhi, and Boundary. The Pitman act, which fixed the price of silver at \$1 an ounce, kept many mines in operation throughout the year and at the termination of its provisions during 1923 a large number of mines will be compelled to close unless some relief is given in the meantime.

Lead

The value of the 1922 output of lead was \$11,762,302.60 and the 1921 output was \$9,559,558.85. The 1922 production was 205,132,588 pounds and the 1921 was 210,100,194 pounds; a decrease of 4,967,606 pounds but an increase in value of \$2,202,743.75 due to the increase in the price of lead from an average price per pound in 1921 of 4.55 cents to 5.734 cents in 1922.

Zinc

The production of recoverable zinc increased from 1,818,313 pounds in 1921 to 5,596,514 pounds in 1922. All of the zinc produced throughout the year was marketed during November and December so the average price of 7.052 cents for these months was used in valuing the output.

The total value of the zinc produced during 1922 was \$394,666.17 or an increase of \$300,600.00 over that of 1921. Shoshone was the only county producing zinc ore during the year.

Copper

The production of copper in 1922 was 3,225,762 pounds valued at \$431,671.47 with an average price of 13.382 cents for the year. Compared with 1921 the total production was 1,380,168 pounds valued at \$172,521.00 with an average value of 12.50 cents per pound; showing an increase for 1922 of 1,845,594 in pounds and \$259,150.00 in value.

Statistics

The compilation of the mineral production for 1922 is the gross metal content of all the ores or bullion produced and marketed during the year with the values figured from the average New York quotation.

The tabulation presented below represents the production reported to the inspector's office and constitutes the most complete and accurate statistics for any one year ever compiled by this office and is not in error to exceed 1 per cent of the total State production.

1922 METAL PRODUCTION BY COUNTIES

Number of Producers		Value
ADA COUNTY		
4	Gold	293.10
	Silver	2.44
		\$ 295.54
BINGHAM COUNTY		
1	Gold	13.44
	Silver	0.04
		\$ 13.48

MINING INDUSTRY OF IDAHO

Number of
Producers

Value

BLAINE COUNTY

25	Gold	855.92 oz.	.....\$	17,691.87
	Silver	466,379.08 oz.	.....	466,379.08
	Lead	3,740,339.00 lbs.	.....	214,471.04
	Copper	39,088.00 lbs.	.....	5,230.76
			
			\$	703,772.75

BOISE COUNTY

30	Gold	6,254.90 oz.	.....\$	129,288.78
	Silver	4,912.12 oz.	.....	4,912.12
	Lead	38,199.00 lbs.	.....	2,190.33
	Copper	425.00 lbs.	.....	56.83
			
			\$	136,448.06

BONNER COUNTY

6	Gold	1,863.64 oz.	.....\$	38,521.44
	Silver	451,011.68 oz.	.....	451,011.68
	Lead	578,989.00 lbs.	.....	33,199.23
	Copper	325,870.00 lbs.	.....	43,607.92
			
			\$	566,340.27

BOUNDARY COUNTY

3	Gold	1.63 oz.	.....\$	33.69
	Silver	60,316.09 oz.	.....	60,316.09
	Lead	3,032,495.00 lbs.	.....	173,883.26
			
			\$	234,233.05

BUTTE COUNTY

6	Gold	1.74 oz.	.....\$	35.97
	Silver	2,417.47 oz.	.....	2,417.47
	Lead	54,226.00 lbs.	.....	3,109.32
	Copper	556.00 lbs.	.....	74.40
			
			\$	5,637.16

CAMAS COUNTY

5	Gold	224.34 oz.	.....\$	4,637.10
	Silver	2,580.63 oz.	.....	2,580.63
	Lead	13,673.00 lbs.	.....	784.40
	Copper	641.00 lbs.	.....	85.78
			
			\$	8,087.91

Number of
Producers

Value

CANYON COUNTY

2	Gold	8.94 oz.	\$	184.79
	Silver	8.54 oz.		8.54
			\$	193.33

CUSTER COUNTY

20	Gold	2,158.89 oz.	\$	44,624.26
	Silver	316,515.50 oz.		316,515.50
	Lead	2,020,864.00 lbs.		115,876.34
	Copper	1,992,302.00 lbs.		266,609.85
			\$	743,625.95

CLEARWATER AND ELMORE COUNTIES

12	Gold	1,878.01 oz.	\$	38,818.47
	Silver	624.05 oz.		624.05
			\$	39,442.52

GEM COUNTY

2	Gold	20.80 oz.	\$	429.94
	Silver	474.93 oz.		474.93
			\$	904.87

GOODING COUNTY

1	Gold	1.27 oz.	\$	26.25
	Silver	0.07 oz. ....		.07
			\$	26.32

IDAHO COUNTY

20	Gold	774.11 oz.	\$	16,000.85
	Silver	351.39 oz.		351.39
			\$	16,352.24

JEROME COUNTY

1	Gold	4.29 oz.	\$	88.67
	Silver	0.25 oz.		0.25
			\$	88.92

LATAH COUNTY

4	Gold	38.33 oz.	\$	792.28
	Silver	2.35 oz.		2.35
			\$	794.63

MINING INDUSTRY OF IDAHO

Number of
Producers

Value

LEMHI COUNTY

31	Gold	.....1,084.80	oz.	.....\$	22,422.82
	Silver	.....98,424.62	oz.	.....	98,424.62
	Lead	.....4,642,159.00	lbs.	.....	266,181.40
	Copper	.....762,309.00	lbs.	.....	102,012.19
					<hr/>
				\$	489,041.03

NEZ PERCE COUNTY

1	Gold	.....0.44	oz.	.....\$	9.09
	Silver	.....3.96	oz.	.....	3.96
					<hr/>
				\$	13.05

OWYHEE COUNTY

18	Gold	.....252.66	oz.	.....\$	5,222.48
	Silver	.....27,042.67	oz.	.....	27,042.67
	Lead	.....309.00	lbs.	.....	17.72
	Copper	.....232.00	lbs.	.....	31.05
					<hr/>
				\$	32,313.92

POWER COUNTY

2	Gold	.....4.42	oz.	.....\$	91.36
	Silver	.....0.39	oz.	.....	0.39
					<hr/>
				\$	91.75

SHOSHONE COUNTY

40	Gold	.....6,049.35	oz.	.....\$	125,040.06
	Silver	.....4,697,517.74	oz.	.....	4,697,517.74
	Lead	.....191,005,840.00	lbs.	.....	10,952,274.87
	Zinc	.....5,596,514.00	lbs.	.....	394,666.17
	Copper	.....93,497.00	lbs.	.....	12,511.77
					<hr/>
				\$	16,182,010.61

TWIN FALLS COUNTY

2	Gold	.....34.36	oz.	.....\$	710.22
	Silver	.....2.22	oz.	.....	2.22
					<hr/>
				\$	712.44

VALLEY COUNTY

6	Gold	.....650.72	oz.	.....\$	13,450.00
	Silver	.....324.46	oz.	.....	324.46
					<hr/>
				\$	13,774.46

WASHINGTON COUNTY

5	Silver	20,423.46	oz.	\$	20,423.46
	Lead	5,495.00	lbs.		315.08
	Copper	10,842.40	lbs.		1,450.88
				\$	22,189.42

STATE TOTALS

247	Gold	22,178.39	oz.	\$	458,427.32
	Silver	6,149,336.15	oz.		6,149,336.15
	Lead	205,132,588.00	lbs.		11,762,302.60
	Zinc	5,596,514.00	lbs.		394,666.17
	Copper	3,225,762.00	lbs.		431,671.47
	Total				\$19,196,403.71

	Building stone and coal			\$	14,800.00
	Limestone	100,613	tons		150,919.50
	Phosphate rock	16,394	tons		65,576.00
	Total			\$	231,295.50
	Grand Total				\$19,517,699.21

MINING INDUSTRY OF IDAHO

ANNUAL METAL OUTPUT FOR IDAHO SINCE 1903

(Statistics for 1903 to 1920 inclusive from U. S. Geol. Survey, Mineral Resources.
Statistics for 1921 from Twenty-third Annual Report.)

1903

Gold	65,850 oz.	.....	\$ 1,361,119
Silver	7,398,970 oz.	.....	3,951,790
Lead	213,143,618 lbs.	.....	9,135,335
Copper	569,484 lbs.	.....	78,589
			Total value
			\$14,526,833

1904

Gold	82,739 oz.	.....	\$ 1,710,365
Silver	7,666,382 oz.	.....	4,389,004
Lead	233,096,375 lbs.	.....	10,197,966
Zinc	2,600 lbs.	.....	130
Copper	5,087,518 lbs.	.....	635,940
			Total value
			\$16,933,405

1905

Gold	52,033 oz.	.....	\$ 1,075,618
Silver	8,679,093 oz.	.....	5,242,172
Lead	259,812,428 lbs.	.....	12,211,184
Zinc	1,228,449 lbs.	.....	72,479
Copper	7,321,585 lbs.	.....	1,142,167
			Total value
			\$19,743,620

1906

Gold	55,588 oz.	.....	\$ 1,149,100
Silver	9,018,815 oz.	.....	6,042,606
Lead	255,014,446 lbs.	.....	14,535,823
Zinc	2,065,597 lbs.	.....	126,001
Copper	9,558,913 lbs.	.....	1,844,870
			Total value
			\$23,698,400

1907

Gold	60,755 oz.	.....	\$ 1,255,911
Silver	8,415,431 oz.	.....	5,554,185
Lead	233,823,854 lbs.	.....	12,392,664
Zinc	6,985,732 lbs.	.....	412,158
Copper	10,890,731 lbs.	.....	2,178,146
			Total value
			\$21,793,064

1908

Gold	69,827 oz.	\$ 1,443,459
Silver	7,469,981 oz.	3,959,090
Lead	206,827,816 lbs.	8,686,768
Zinc	37,410 lbs.	1,758
Copper	10,041,850 lbs.	1,325,524

Total value\$15,416,599

1909

Gold	70,329 oz.	\$ 1,453,822
Silver	7,041,633 oz.	3,661,649
Lead	215,986,285 lbs.	9,287,410
Zinc	1,351,010 lbs.	72,954
Copper	9,115,489 lbs.	1,185,014

Total value\$15,660,849

1910

Gold	53,060 oz.	\$ 1,096,842
Silver	7,369,742 oz.	3,979,661
Lead	228,258,839 lbs.	10,043,389
Zinc	5,603,114 lbs.	302,568
Copper	7,037,292 lbs.	893,736

Total value\$16,316,196

1911

Gold	66,389 oz.	\$ 1,372,387
Silver	8,196,136 oz.	4,343,952
Lead	272,556,525 lbs.	12,265,044
Zinc	8,340,249 lbs.	475,394
Copper	5,152,937 lbs.	644,117

Total value\$19,100,894

1912

Gold	66,816 oz.	\$ 1,381,214
Silver	8,294,745 oz.	5,101,268
Lead	284,185,657 lbs.	12,788,355
Zinc	13,905,502 lbs.	959,479
Copper	7,492,152 lbs.	1,236,205

Total value\$21,466,521

1913

Gold	65,043 oz.	\$ 1,344,559
Silver	9,989,193 oz.	6,033,473
Lead	317,871,945 lbs.	13,986,366
Zinc	23,173,953 lbs.	1,297,741
Copper	9,592,966 lbs.	1,486,910

Total value\$24,149,049

MINING INDUSTRY OF IDAHO

1914

Gold	55,743 oz.	\$ 1,152,315
Silver	12,479,516 oz.	6,901,172
Lead	348,526,069 lbs.	13,592,517
Zinc	42,012,435 lbs.	2,142,634
Copper	6,445,187 lbs.	857,210
Total value		\$24,645,848

1915

Gold	57,069 oz.	\$ 1,179,731
Silver	11,769,128 oz.	5,966,948
Lead	345,999,466 lbs.	16,261,975
Zinc	70,153,234 lbs.	8,699,001
Copper	6,978,713 lbs.	1,221,275
Total value		\$33,328,930

1916

Gold	53,977 oz.	\$ 1,115,810
Silver	12,300,873 oz.	8,093,974
Lead	375,081,781 lbs.	25,880,643
Zinc	86,505,219 lbs.	11,591,699
Copper	8,478,281 lbs.	2,085,657
Total value		\$48,767,783

1917

Gold	38,933 oz.	\$ 804,809
Silver	12,029,338 oz.	9,912,175
Lead	393,559,521 lbs.	33,846,119
Zinc	79,854,136 lbs.	8,145,122
Copper	7,827,574 lbs.	2,136,928
Total value		\$54,845,153

1918

Gold	33,999 oz.	\$ 702,816
Silver	9,172,340 oz.	9,172,340
Lead	294,695,993 lbs.	20,923,416
Zinc	45,161,712 lbs.	4,109,716
Copper	6,533,888 lbs.	1,613,870
Total value		\$36,522,158

1919

Gold	34,503 oz.	\$ 713,238
Silver	5,579,056 oz.	6,248,543
Lead	182,341,898 lbs.	9,664,121
Zinc	15,994,229 lbs.	1,167,579
Copper	3,122,763 lbs.	580,834
Total value		\$18,374,315

1920

Gold	23,490 oz.	.....\$	485,590
Silver	7,326,794 oz.	.....	7,986,205
Lead	249,609,976 lbs.	.....	19,968,798
Zinc	27,932,326 lbs.	.....	2,262,518
Copper	2,538,396 lbs.	.....	467,065
Total value			\$31,170,176

1921

Gold	26,750.76 oz.	.....\$	552,938
Silver	6,184,989.73 oz.	.....	6,184,989
Lead	210,100,194.00 lbs.	.....	9,559,558
Copper	1,380,168.00 lbs.	172,521
Zinc	1,818,313.00 lbs.	94,006
Total value			\$16,564,014

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