

SILVER AGE RETURNING

History is repeating itself with a vengeance. It has raised the money shortage of the close of the Civil War to the power. It demands a thousand-fold that market shall make good. And how shall it be done?

During the world war men hung at each other two hundred billion dollars worth of the world's wealth. Everything that they used in their saturation of destruction came from the ground. They had digged the stuff from Mother Earth only to hurry it through the air and bury it again in the soil of France. After the same is over it becomes time to pay. The reckoning is at hand.

Naturally enough, when it comes time to settle, we think of money. When we think of money we think gold and silver money. Paper has a suspicious color when governments are tottering.

Gold production is dwindling. There are other deposits that will be found but they will be all too inadequate.

Thus we come to silver once more just as the nation looked to the famous Comstock at the close of the Civil War. That great lode put \$600,000,000 worth of the white metal in circulation and saved the credit of the Union. It is now the task of western America and the rest of the world to put several billion dollars worth of silver in circulation and save the credit of humanity. Gold is ever useful and will be sought diligently, but silver because it is available can be sought peacefully and absorbed greedily. There will be no let up in the world's demand for silver for another century. To put the proposition baldly and convincingly, only a fool would dare to predict how high the price of silver will go, and by his prediction he will betray his folly.

With this preamble we arrive at the absorbing drama of western mining today. We see a wonderful story unfolding as if by magic. Men are searching for silver as they never searched before. In spite of the fact that the warning has been sounded ever since the very outbreak of the war, the mining industry has just awakened to the fact that silver is the most precious of all precious metals.

It requires little imagination to speculate on what this means to the states of the intermountain country. They are on the backbone of the continent where the silver shines. To them the nation looks once more in the time of dire need.

It means a revival in mining that has not been experienced for sixty years. It is not too much to say that the need of silver will bring back the big copper producers, if for no other reason than to get their silver by-product. It means the revival of every old silver camp in the west; it means such a development of new prospects as was never possible before.

Every silver camp in the west is booming. Utah districts are among the first to respond. To any one who would like to know the reason why, the following table and careful analytical discussion will be of absorbing interest:

Silver Estimated Demand Several Times Total Output.

Production	World	U. S. A.
1919	3,155,000,000	55,000,000
1918	3,177,453,209	67,872,208
1917	3,287,787,883	60,329,400
Demand		
Reported		Industrial uses.
1919	300,000,000	55,000,000
1918	298,537,435	45,000,000

The London or "world" price of silver reached a record high of 79 1/2 pence per ounce British standard. This would have amounted to \$1.72 1/2 per ounce for American silver, whereas British money worth the normal exchange value of 48.65 cents to the pound sterling.

The coinage of the British empire and the rest of the world except the United States has reached the point where the coin value of silver coins is less than the bullion value of the metal. An ounce of silver goes to make up 66 pence in British coins, but the same ounce of British silver is worth over 75 pence for the metal at the market price of silver. This must result in the melting down of British coinage and its sale as bullion. The British government has tried to prevent this, but prevention is impossible. The exportation of silver from Great Britain has been prohibited. Hence under present conditions the condition of disappearance of silver coinage (as of gold), only worse, has long assailed France, Germany, Italy and the rest of Europe and Mexico and the Orient.

The remarkable silver situation follows upon the withdrawal of gold from general circulation. There is scarcely enough total gold in the world to meet the yearly interest on the war debts of the great nations. All the nations, great and small, are hoarding gold.

The burden of carrying on the world's trade falls more heavily on silver and on paper. The expansion of paper "money" accounts largely though far from entirely, for the depreciation of foreign exchange. It would have been bad enough even before the war to withdraw gold from general circulation, and place on silver money and on paper the burden of carrying the pre-war trade of the world. The burden is now much heavier owing to the higher prices of goods and owing to the larger volume of goods traded in.

There are four great world demands of silver. Three of the four, each of them alone, require more silver than the world can possibly produce.

These three great world demands for silver are (1) to pay the trade balance due such countries as India, China and other silver nations that, fortunately, will be satisfied to receive silver instead of gold in payment for their goods; (2) silver to act as a "backing" for the billions of unsecured paper "money" issued during the war, and variously estimated at 12 to 22 billions of dollars at normal exchange value, and which must continue as valueless "ship-planters" unless secured by either gold or silver reserves of some sort; (3) silver coinage demands. Demands enumerated here as numbers (1) and (3) each year require more silver than has been produced or than is possible of production.

We have purposely said nothing of the demand for silver in jewelry, the

of the leading silver nations such as China, Mexico, India, etc.

Perhaps half the total war paper "money" will ultimately be wiped of the state as valueless, especially the paper of Russia and Germany. However, not less than 5,000,000,000, by most conservative guess, will have to be "secured" by either gold or silver or both gold and silver. Gold will probably be out of the question, if silver can possibly be stretched to serve the purpose.

It is quite conceivable that the nations of the world may "go easy" on issuing new silver coinage, and instead buy great quantities of silver to hold in the national treasury as a "reserve" or backing to validate the huge issues of paper money. The great cry of leading nations nowadays is lack of available money, money that will pass muster among other nations. It would be a titanic step forward to validate the issue of unsecured paper put out during the war. If a 25 per cent reserve could be set up in silver or gold in national treasuries, it would serve to bring up about \$5,000,000,000 of paper money to somewhere nearer par value than present greatly depreciated values of the paper "money." A 25 per cent reserve on \$5,000,000,000 of paper would require \$1,250,000,000 in silver (or gold, or both silver and gold) to be built up in the next few years, say ten years, or \$125,000,000 a year. It is probably true that the leading nations could better utilize silver "money" in this way, than in issuing great quantities of actual silver coins.

A certain amount of silver coins would always be necessary—enough to establish some sort of par or fixed value for silver. If the "par" value of silver be fixed by new coinage regulations or otherwise at, say, around \$1.75 per ounce, or 32 pence, the number of ounces of silver available would permit the validation of a larger and larger quota of paper "money" as the value per ounce of silver goes higher and higher.

We have not spoken much of the "commercial" demands for silver in the photo and film, the jewelry and plating, and other industries. The United States alone consumes about 25,000,000 ounces of silver a year in this way. The total world demand is now between 50,000,000 and 60,000,000 ounces a year, exclusive of jewelry made and that consumed in India and the Orient.

What the world needs nowadays is some wizard or group of wizards who can supply \$50,000,000 a year in silver to India and China and the silver nations; at least 200,000,000 ounces silver a year to the mints of the world for coinage yearly; about \$125,000,000 a year to validate part of the huge issues of paper "money" put out during the war; leave, say, 60,000,000 ounces of silver a year available for the modest and commercial industries; and make a total world production of 145,000,000 to 250,000,000 ounces a year "go round."

Only a fool would dare predict how high the price of silver will go, and by his prediction he will betray his folly.

The history of the Pioche district is well worth reading. There is a thrilling story chapter, the glamour of wealth in every paragraph. It proves that the district is a locality where Nature has been prodigal with her riches. It is a region where one would turn instinctively when looking for a great mine. It is the location of the Prince mine, the property of the Prince Consolidated Mining & Smelting Company, which offers potential possibilities scarcely exceeded by any mine in the west.

Although the first discovery of silver in the Pioche district was made in 1864, it was not until 1869 that real mining commenced. William H. Raymond and John H. Ely entered the camp broke, bought a claim on nerve, made it pay from the start, organized the Raymond & Ely Mining Company, and in less than two years were paying the stockholders \$210,000 a month in dividends. The gross production of bullion in Pioche for the year 1871 was \$2,295,410 and for 1872 was \$3,359,409.

According to the report of the state mineralogist of Nevada the mineral output of the Pioche district during the seven years ending with 1877 was 329,763 tons of ore which yielded bullion of the value of \$16,828,046. The average yearly production during the seven years period was 47,108 tons valued at \$2,401,000. The average value of the ore was a trifle over \$51 a ton.

A historical fact of the camp states that no less than 50 shafts "struck it rich" and that with a bucket operated by a wheel a thousand dollars worth of ore per hour was often hoisted for 24 hours of the day.

Not all of the ore, however, was rich enough to stand the 300-mile haul to the railroad. There was a steady accumulation of mineral which, though high grade according to present-day standards, was not shipping grade under conditions prevailing at that time. To commercialize this class of ore, milling was necessary. Milling required water. The nearest supply of water in quantity was at Panaca, a Mormon settlement 12 miles from Pioche.

So it came about that the big mining companies brought their mining machinery to Panaca, which resulted in the mill town known as Bullionville.

An amalgamation was the process used. The operations were satisfied with 40 to 50 per cent of the gold and 75 to 80 per cent of the silver in the ore. Half the gold and a quarter of the silver were discharged with the tailings. Year after year the tailings dumps with their sweetening of the previous metals grew bigger and bigger.

The boom days ended with the demoralization of silver and the occurrence at depth of complex ores which refused to yield to the treatment methods then known. The Raymond & Ely suspended operations at a depth of 1,200 feet and the Meadow Valley at 1,200, after earning fabulous sums for their shareholders.

In recent years new capital has come interested in these mines. Modern methods are to be applied to the reduction of the ore, and there is every reason to hope that fresh fortunes will be made from the famous old fissures below their 1,200 and 1,300 levels.

Over the high hills to the southwest about three miles from the town of Pioche is the Prince Consolidated mine. In the '70's it was only a prospect hole known as the "Black Prince." John Ely of the Raymond & Ely company, either made or purchased the location. In 1876 Ely met W. S. Godbe, who was operating a small smelting plant at Frisco, Utah. Godbe mentioned the difficulty he was having in getting fluxing ore for his smelter.

"Come with me to Pioche," said Ely, "and I will show you all the fluxing ore you want."

Godbe went. Ely showed him on the Black Prince a generous outcropping of iron ore. It was ideal for fluxing purposes. Ely thought there was enough gold and silver with the iron to justify the wagon haul to Frisco. Godbe's tests did not bear out this optimistic supposition and he abandoned the hope of obtaining fluxing material from Pioche.

His visit, however, had important results. The great waste of values in the tailings of the Bullionville mills vexed his soul and seemed to challenge his skill as a metallurgist. He decided to try his hand at re-treating the discarded matter.

There was no particular difficulty in buying the tailings. It was a great task to procure the equipment necessary to handle them. Godbe succeeded, however, in putting up a suitable mill and a small smelter. The results justified his faith. The venture was highly profitable and enabled him at his death to leave a comfortable fortune and a valuable property to his family.

While Godbe was busy at Bullionville the Prince claim was neglected by its original locators. Their rights lapsed and the ground was relocated by John Reese and partners. They, in turn, sold it, after doing a little more prospecting, to William Lloyd and other citizens of Pioche. More development work was performed and a patent was secured from the United States government.

Meanwhile the Godbe interests at Bullionville had been incorporated by Mr. Godbe's sons as the Phoenix Reduction Company. Plans were afoot to rebuild the smelter, now fallen into disrepair, and the question of fluxing ore again came to the front.

As their father had done years before, the Godbe boys turned their attention to the iron deposits of the Prince for a solution of the problem. Territory to the already well known Tintic mining camp. "That the ore is there is conceded by all mining men who have visited the property, and with the present expert, careful and energetic management the year of 1920 should see the faith of the stockholders realized and a producer added to the already large number of successful mines in the Tintic camp.

PRINC CONSOLIDATED SINKS FOR KNOWN TREASURES

The owners were willing to sell. Terms were agreed upon and in 1906 the Phoenix Reduction company became the owner of the Prince claim. The development at that time consisted of a vertical shaft about 150 feet deep, an incline shaft down 100 feet, connected with the vertical, and three short drifts. The claim was a small one, being only 1,500 feet long and 200 feet wide.

The purchasers continued the sinking of the incline shaft. Thinking they were following a wide vein on its dip they were mystified by the behavior of the ore. It disappeared completely at times and then came again.

No further steps toward the completion of the shaft were taken. Another method of disposing of the tailings presented itself and the need of fluxing ore then ceased to be the incentive for operating the Prince. Mining became the paramount aim of the company as the reduction part of the business went into eclipse.

The Phoenix Reduction company was reorganized on a broader basis in 1907 as the Prince Consolidated Mines & Smelting Company with a capital stock of 1,000,000 shares, par value \$2.00.

The new corporation took in, in addition to the Prince and Bullionville claims, several mining claims adjoining the Prince. Work was continued on the incline, the first notable development being in a crosscut from the footwall to the east side of the shaft. Instead of the supposed vein of iron ore, a series of beddings emanating from the fissure mentioned and from another similar fissure further to the north.

The revelations changed completely the manner of development and opened the way for the extraction of fluxing ore on a large scale. There was a strong demand for it from the smelters but, as in the days of the elder Godbe, the cost of transportation was prohibitive.

The Bullionville tailings near the railroad, were not so handicapped. In 1911 the shipment of the old dumps was commenced. Fifty thousand tons were marketed and brought the Prince company approximately \$290,000. The completion of the incline left about 100,000 tons still in the dumps which, with a mill erected to treat them, are now leased on a royalty basis to a large metallurgical company.

With the returns from the tailings the company constructed a private railroad nine miles in length to the shaft of the Prince mine, thus solving the transportation problem. From the time the railroad was completed there was a steady market for the ore which contains, in addition to a heavy proportion of iron, heavy values in silver, lead and manganese. From five to eight thousand tons were accepted monthly by the smelters, depending on their fluxing requirements.

Development of the mine proved the existence of five distinct beddings from 5 to 90 feet respectively, in thickness, averaging 300 feet in width and extending as much as 1,500 feet along the strike of the fissures. The two main beds, except where their identity was lost, were the 11 and 12 feet bed in thickness and carried high grade silver-gold ore which was stored at a good profit to the company.

We now come to the dawn of the new era for the Prince Consolidated which places it among the biggest potential properties of the west.

Exploration with diamond drills has proved the presence of additional beddings at 900 and 1200 feet in the surface, one with a minimum thickness of 12 feet and the other 11 feet. These beddings carry ore worth approximately five times as much as the fluxing ore in the upper beddings.

With the returns from its iron ore shipments the Prince has increased its territory to twenty claims, constructed a new vertical working shaft 700 feet in depth, settled some troublesome legal controversies, brought its mechanical equipment strictly up to date and paid its stockholders \$574,924.00 in dividends.

Among the present assets of the company engineers compute the quantity of iron-manganese ore now existing in the five upper beds at 750,000 tons from which a net return of \$2 to \$4 per ton could reasonably be expected, and the 100,000 tons of the Bullionville tailings.

To this must be added the great prospective tonnage which has been demonstrated by the diamond drills and which the company is going after through the construction of the vertical shaft which was started last fall from 100 feet above the water level and which under the rapid contract work of Walter Fitch, Jr., is now nearing the upper of the two unexplored bedding planes. These planes are given a minimum prospective area of 300 feet in width and 1,500 feet in length, while the two high-grade fissures give every indication of extending into the quartzite far below the new bedding planes.

Pertinent facts to be remembered by anyone watching the progress of the Prince Consolidated are that the company has already shipped 750,000 tons of ore and is now shipping at the rate of 5,000 tons per month. The assurance veins that runs through the mineralized section of the Prince group and from which considerable high grade lead-silver ore was extracted above the water level (around 1912) go down strong below water and give every indication of permanence and productivity. The first-class ore produced from various chutes in these fissures assayed 150 ounces of silver, \$4.20 gold, and 39.45 per cent lead; the second class assayed 48.85

ounces silver, \$3.48 gold and 18.5 per cent lead.

The camp of Pioche and, in fact, all mining men of Utah are waiting with much interest the development in the Prince. As the shaft nears the first bed plane at the 900 level there is interest speculation as to what the bed itself will contain, and there are fascinating possibilities. Indeed, at the juncture of the plane and the fissure veins.

FARGO OIL COMPANY
BUILDING A BIG
PIPE LINE
Development of Vast Importance to Oil and Gas Production of Wyoming
OGDEN MEN INTERESTED IN THE PROJECT
Pipe Line Now Across the Plate—Will be Completed by Mid-Summer Time

field. The company controls approximately a dozen gas and oil wells in that region with present production capable of supplying the demand here for years to come and prospects that the string of domes lying west of Casper, contain an inexhaustible supply for the future.

The mills already are rolling the steel for the Casper. The Fargo company will be built and owned by the Fargo company. No steps toward distribution will be made until the gas is brought to Casper.

The Fargo Oil Company also is laying plans for extensive development work in the south of Texas and New Mexico. In Texas the company controls some 8,000 acres of prospective oil lands in Coke and Reynolds counties; and in New Mexico it holds leases on 88,960 acres in the vicinity of Alamo, extending through several counties. Negotiations are said to be pending whereby eastern capitalists will undertake to test this land through "check-board" leasing by the Fargo company. The latter will thus secure the benefits of such tests without drilling expense.

THE ONTARIO IN RICH ORE
With a large amount of work now going forward in the famous Ontario property at Park City, which is being carried on principally by leasers, many exceptional bodies of rich ore are being found. These bodies, which are being leased to the Ontario, are steadily bettering metal market, and are speeding up the work and are of exceptional character is being broken out in many sections of the mine.

This great lode, which has been opened for the better part of a mile along the strike, and to a depth of 2200 feet has been one of the phenomenal producers of the west and is still going strong. Its history is so interesting one.

Development of the mine was started from the outset on a broad scale as a result of the great flow of water developed in the mine almost from the outset of operations.

The first long drain tunnel drive into the property was run on the 600-foot level. This drainage and transportation tunnel was driven in 1881 from the Ontario mill, a distance of 6377 feet, to connect with the No. 3 shaft, and 500 feet beyond that point, thence 2700 feet west to the No. 1 shaft, and was later continued to deeper workings agreements between the companies into the Dady and Dady West workings.

As development in the shafts extended below this level to a point where giant pumps were unable to properly handle the flow of water, as other and deeper tunnels was projected and late in 1888 the great tunnel which drains the mine to the 1500-foot level in the No. 3 shaft, was undertaken. This tunnel is absolutely straight and is 15,190 feet long. It was completed October 7, 1894, when the part driven from the mine shaft was connected with the part driven from the portal three miles distant. The total cost being about \$400,000 it is believed this tunnel, which carries a big flow of water, drains many of the drainage area, embracing the large mines on this lode. The great length of underground workings in the mine, exclusive of numerous stopes and inclines, is about 50 miles.

The upper two-thirds of the Ontario is in quartzite, while the lower third is in limestone or marble. The fissures through the Ontario are large and persistent with a trend northeast and southwest and dipping northeast. The Ontario workings cut a similar persistent fissure with a similar orientation, which was accepted as spur although some engineers regard them as different fissures of a different age. These are also two other fissures of considerable size in the footwall country rock. The width, strike and dip of the fissures vary in different places in the mine. The fractured zone is in various parts of the mine is found to run from two and a half feet to a hundred feet in width.

The ore bodies have all been found within the fissures, varying in size in thickness the width of the fissure it shoots throughout the breccia within the fissure. From the surface to approximately the 800-foot level, silver was mainly an oxidized rich silver product. From there to the 1500-foot level lead came in and it was lower in value but still a high grade ore. From the 1500 level to the lower character of the ore generally is lower in value and carries considerable zinc.

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Ever since Atlas held up the world these fellows who figure he's "spellin' him for a lifetime.

LEHI TINTIC HOLDS STRONG PROMISE OF PAY ORE VERY SOON

It is a source of wonder to mining men who visit the north district of the great Tintic mining camp and investigate its splendid surface showing, why real development has been delayed so long. All indications go to show that the ore bodies are there, and with scientific, economical development, mines can be opened that will repay the investment of capital.

The mining company can be said to be mining in this district and while much of the work done on this property has been of a haphazard character, ore has been opened in three places from the top of the mountain down to within 170 feet of the present No. 4 tunnel. True, the ore has not been of a commercial grade in sufficient quantity to permit of continuous shipments, but some ore has been shipped and the opening of these ore bodies has demonstrated that a big strike work great depth will in all probability open a real mine.

Commencing on November 1 the property was placed under the management of Charles Zabriskie, who was identified with the Iron Blossom in the Tintic district. On his recommendation the directors started a main working tunnel as low down the mountain as possible, with the object of intersecting the north and south fissures 170 feet below the No. 3 air tunnel level. This tunnel has now been driven about 300 feet and progress is being made at the rate of nine or ten feet a day. The objective of this tunnel is about 1200 feet ahead, and before reaching that distance it is expected to cut at least three ore fissures. There is also the prospective plan that this tunnel may be carried four or five hundred feet more, with the object of intersecting the Gold Blossom vein at a depth of 1000 feet below its outcrop on the surface, where considerable high grade ore was mined years ago. Everything about the property is being conducted in an economical manner consistent with intelligent development.

The company owns some eighteen claims, embracing 350 acres, upon which application has been made for survey for patent. It also owns a water supply sufficient for all purposes, and this is a big asset to any company mining in this district.

The equipment consists of a 12x12 shaft stage compressor, a 40-horse power motor, three Clipper drills, one water Leyner drill, one Anaconda air hoist, air receiver, oil filter and transformers, while in addition there are the usual tools necessary for making emergency repairs, together with a modern bunhouse for the men.

Much interest is being taken by mining men in the development of this property, as the opening of a paying mine means the addition of a large