

0440 0015

Reopening of the Spanish Belt Mines, Nevada

CHAPTER ONE

April 15, 1920

Breaking a Rip Van Winkle sleep of thirty years, a one-time famous and flourishing silver camp of the seventies and eighties has re-entered the list of high grade shippers. But in this revival Spanish Belt, the camp with which this article deals, only joins company with several other once famous silver camps of Nevada, such as Pioche, Austin, Eureka and others.

The opening of new mines in old camps or the reopening of old mines in old camps, is the most profitable, and at the same time, most prominent feature of present day mining operations. The day of the new camp passed into history with the ox teams, stage coach and buffalo.

The Spanish Belt mining district covers a silver producing area some ten miles square, centered about seven miles west of Belmont and by auto road, about fifty miles north of Tonopah, in Nye county, Nevada. The principal mines of the district are clustered along the southeast slope of Spanish Peak and lying mainly between the heads of Antone and Silver creeks, at an elevation of 7,000 to 9,000 feet above sea level. Spanish Peak having an altitude of 10,000 feet is one of the highest points and most prominent landmarks in the Toquina Range, separated only by Baxter Pass. The Tonopah hills are a southern prolongation of this lofty range.

REGION IS PICTURESQUE

In the vicinity of the mines the steep mountain sides and gentle sloping foothills bordering the Ralston desert are covered with an abundant growth of nut-pine, cedar and mountain mahoganies. Facing the north in the higher sheltered recesses and basins, white pine and aspens grow in limited patches, large enough to turn into native lumber; and this was the only source of supply in the early mining days. The higher ridges and slopes are covered green with bunch grass varied with a wealth of richly colored mountain flowers, making a pleasing contrast to the gray and white sage of the desert below.

Within the general region known as the "Great Basin" that extends westward from the Wasatch uplift to the Sierra Nevada Cordillera, semi-arid conditions exist; but locally at Spanish Belt the Toquina range furnishes an ample water supply for all domestic and mining uses. A temperate climate prevails, with only occasional wide ranges in temperatures and humidity; making it a healthful habitation for the miner, and a delightful summer home for those who fain would escape the sultry heat of the lowland and the cooped-up city dwelling.

Spanish Belt district derives its name from a Castillian grandee, named Emanuel San Pedro. This doughty pioneer, imbued with that inner impulse or elemental urge of the explorer, organized and equipped a party of Mexicans in California in 1870 for an expedition into the then trackless wastes of Nevada, that resulted in the discovery of these Spanish Belt silver bonanzas. With the ambitions and spirit of a Columbus, he was a leader of fine ability and imagination, delighting in the hope of Pluto's favor and the wild romance of a new world.

DISCOVERIES FOLLOW PROSPECTING

After a sojourn on the Comstock lode he pushed on southeast for 200 miles and established a rendezvous at Spanish Springs, his winter camp, twenty-five miles north of Tonopah on the Belmont road. From this base he divided his company of Mexican miners into parties and sent them forth to prospect the nearby ranges. The discovery of the Barcelona, South Barcelona and Liguria mines, in the summer of 1871, was the outcome of his operations, and the beginning of mining at Spanish Belt.

San Pedro's mining operations here were commercially successful from the "grass-roots" beginning. At the point of discovery on the Barcelona claim he sunk a shaft on the steep slope of the vein to a depth of 145 feet, at this point reaching water level. His first stope in ore was turned at seventy-five feet and the second at the bottom of his shaft. From these two stopes ore to the value of about \$60,000 was mined in the course of two seasons. It is from this same shaft, now the property of the Consolidated Spanish Belt Silver Mining Company that ore running between \$500 and \$1,000 per ton is now being mined and sent to market.

In the meantime other discoveries followed and in 1873 the Spanish Belt mining district was booming along in a truly spectacular style. A town sprung up just west of San Pedro's castle, and daily stages plied between the camp and Austin. At about this time a coterie of mining men bought San Pedro's mines, paying him therefore a comfortable fortune in cash.

The late Col. William A. Farrish, for a generation a noted figure in the mining world, was, as a young engineer, the first superintendent that succeeded San Pedro's operations. Under his superintendence and direction his company drove the first drain tunnel into Barcelona ground. This adit was driven over 1,600 feet into the mountain, passing through the vein system into the footwall granite of Spanish Peak. Here a singular thing occurred. At about 1,100 feet in this tunnel, the Ernst or San Pedro vein, in its most attenuated and barren spot, was cut. So lean was it, in fact, that Farrish did not believe it to be the right vein

and continued his tunnel into the mountain 500 feet further, passing through the Barcelona vein 150 feet in. No paying ore was encountered with this tunnel work and the company becoming discouraged, closed down; the mine remaining inactive for several years, until finally it was given over to lease. The leasers found the ore. Drifting less than ten feet each way on the lean quartz at the 1,100-foot station, a great ore body 400 feet long of bonanza ore was exposed.

LEASERS REAP FORTUNE

Such are the risks and chance of gain in mining. This find yielded a fortune to the lucky leasers, and years of successful mining followed as a result of their work and good judgment. Probably the most successful leaser of all was George Ernst, who carried a long drift eastward into another big ore body that netted him an independent fortune. In all operations up to 1890, approximately a half million dollars was mined out, and this mainly from the Barcelona claim. Yet in all these operations by various leasers and on company accounts, less than 10 per cent of the mineable area above the tunnel level was worked out, and none below. All this was done after silver had been given short shrift by Plethora's devotees, who had elected to worship at the shrine of the Golden Calf.

Whenever a mine or district earns a merited prominence and popularity by its yield of the precious metals, the veins, their ores, the rocks and their relation to each other and the surrounding formations become of interest to both the layman and technical student interested in the fascinating occupation of mining. Deposits and veins of gold and silver are found in rock formations which have been folded, faulted and invaded by metal bearing solutions, igneous or volcanic rocks, or both. Veins and deposits have been formed at different times, under different conditions and at different depths below the surface of the earth. Their varied characteristics tell us these things when we learn to read them from the book of nature.

Certain rock formations seem to possess an affinity or selective power over some of the metals. Chrome, cobalt and nickel ores are found in peridotite formations, and the monzonite porphyries attract the copper minerals, while limestone formations everywhere take up lead and silver minerals as their own.

CHARACTERISTICS OF VEIN FORMATIONS

Spanish Belt district boasts two sets or kinds of deposits and both are in, or related to, the Silurian limestones that compose a large proportion of the formations of the district. These lime-

stones have been intensely folded and fissured and intruded with great batholiths of eruptive granite, and granite-porphyrries.

The two unrelated systems of veins are almost parallel to each other and not far apart. They were formed at widely different times in the earth's history, and at greatly different depths below the surface.

The oldest, or first vein formed, is a contact-metamorphic deposit that was formed in the "deep zone." This is the Barcelona and lies to the north and beneath the other veins. Its characteristic minerals are garnet, epidote, molybdenite, some quartz and a little copper pyrite. Where it has not been disturbed or enriched by subsequent mineralization its values in gold and silver are modest. But the second period of vein forming took place so close to it that some of the vein forming disturbances involved a section or block of the vein on this Barcelona claim; and as a result it received a second supply of sulphide minerals. This last addition was mostly silver and leaked into it from the newer nearby San Pedro vein.

The San Pedro or Ernst vein is a linked fissure and was formed in the middle or "bonanza zone"; much geologic time having elapsed between the ages of these two deposits. The mountain had been lifted into nearly its present position, and a long period of erosion had worn thousands of feet of its top away, and dumped it into the valleys below, before the gradual shifting of its superincumbent load, expressed itself in a readjustment of strains which produced the final fissures.

Following lines of weakness, the newer fissures cut most of their way through the Silurian limestones; but in places they cut down into the granite that formed the older deposit, which is good evidence of their later origin. Cinnebar, a quicksilver ore, does not form in the deep zone, but it is found in the San Pedro vein in considerable amounts locally. This metal, in association with a little lead and copper and the rich silver compounds, show the deposition of these ores to belong to the bonanza zone along with the Comstock, Tonopah and Goldfield deposits.

The metal-bearing solutions that filled the newer fissures were strongly acid, as the deposition of much vein quartz proves. They may have been the same pent-up solutions that had beforehand deposited their load of contact-metamorphic minerals of the Barcelona vein in the deep zone, and now found an avenue of escape upward along the newer formed fissures. Coming in contact with alkaline limestone their acidity would be neutralized, and the remaining load of silver and other metallic sulphides deposited as a result. So in this way, the same agencies may have operated at widely different times, and in a changed en-

vironment, to produce entirely separate and unlike deposits. All this is possible, yet it is also possible and even probable that a new set of energies and solutions were brought into play by the orographic disturbances that formed the San Pedro fissures. But whatever were the forces involved, it is something to know that a great amount of metallization was accomplished, and economic deposits of silver were formed in Nature's great laboratory, to be in time discovered by Emanuel San Pedro.

RESPONSIBILITY FOR CAMP'S REJUVENATION

The rehabilitation of Spanish Belt owes its accomplishment to the tireless efforts of Messrs. Victor and Jules V. Barnd. The brothers combined their energies in 1916 and organized the Consolidated Spanish Belt Silver Mining Company. Many obstacles stood in their way, and serious problems had to be met and solved. Most of the old mine openings were caved, and roads were overgrown and impassable; and all of the old mine buildings, machinery and equipment reduced to ruin. Notwithstanding, the enterprise was attacked with a steadfast resolution and the definite and single purpose of ultimate success, based on an abiding faith in the potential future value of Spanish Belt.

Enlisting the confidence and generous help of their friends and associates a new drain tunnel over 1,500 feet long has been driven into the San Pedro vein, cutting it at a level below the old Farrish adit. The new adit has reached the old stopes and is the avenue through which the lower levels are being worked and ore extracted. This work has been carried on without serious interruption down to the time when they have added the Consolidated Spanish Belt Silver Mining Company's name to the galaxy of good mines.