GOLD MOUNTAIN, LOCATION OF UTAH'S GREATEST PRODUCER OF GOLD.

GOLD mountain occupies the extreme north end of the Mt. Baldy mineral belt, and is situated within the shadows of Mts. Belknap and Baldy, the two giant peaks of the range. The great phonolitic belt, heretofore described, traverses the district northearly and southerly, and forms the high divide between Fish creek and other streams on the west, and Deer Creek canyon to the east.

It was nearly 20 years ago that the Sevier, General Connor and other properties were discovered and located on Gold mountain. Until about six years ago conditions in the district were similar to those that have maintained in Marysvale. A few shipments of ore from the surface of veins on the Blue Bird and Silver King groups were sent to market, otherwise the camp languished for capital except on the Breckenridge Mammoth where considerable development work was done under the direction of James Long.

OPENING OF A BONANZA.

The opening of the Annie Laurie mine some six years ago by Mr. Kimberly and his associates rescued the district from semi-oblivion and banished the Mt. Baldy "hoodoo" from that section of the range. From the phonolitic belt, before mentioned, a spur projects out towards the west, then bends north and abruptly ends in the depression now known as Kimberly basin. The Annie Laurie vein traverses diagonally the east side of the spur and enters the Blue Bird ground, now a part of the Annie Laurie Mining company's holdings. The vein was opened by a tunnel from the north base of the hill and every foot driven on the lode more clearly emphasised the fact that Kimberly and company were opening up one of the great mines of the state, and thereby proving beyond cavil that the intelligent investment of money in that country would bring great and certain returns. While narrowing down in places along its strike, the average width is great and often swells into enormous chambers of milling ore containing good values in gold and silver.

The Annie Laurie Mine and Mill.

FOREMOST among the gold producers of the state is the Annie Laurie mine of the Gold Mountain district. In fact, developments made during the year, place it pre-eminently in the lead of all others of its class.

The completion of what is known as the No. 5 tunnel and the striking in it last April of the Annie Laurie ledge at a distance of 3,000 feet in and 426 feet below all other workings, not only made good this claim, but it did more: it established the permanency of the camp beyond any peradventure of doubt. The completion of the adit was a great achievement in more ways than one; it not only increased the ore reserves of the company manytold, but it will enable more economic its delivery to the mill where the precious contents are extracted and reduced to bullion. The vein shows a width of 28 feet in this new tunnel, and the values continue as uniform as they proved to be in the workings above. At the present time the ores are delivered through the No. 4 tunnel and over a gravity tramway to the mill. The tramway will soon be done away with; as No. 5 tunnel will shortly be connected with No. 4, by means of a tripple compartment, upraise, 7x14 in dimensions. The work of making this upraise is now in progress, having been run about 200 feet, and will be finished in the early part of February next. This done, all the ores will be taken out of the mine thereafter through the No. 5 adit, which is on a level with the crushing department of the mill.

In the tunnel 30 pound steel rails are being laid, over which trains of 4-ton mine cars, pulled by electric locomotives, will be operated. The tunnel will be electric lighted throughout and, on a whole, will be as well, if not the best, equipped in the state.

In conformity with the changes that have been taking place in the mine, the company, during the year, added new equipment to the mill, raising its capacity to 300 tons a day, and it is possible further additions will be made to the plant next year.

During the past four years the Annie Laurie, notwithstanding an extensive campaign of development has been carried on, has paid dividends to its stockholders aggregating the sum of $249,516 and at the present time is paying at the rate of $12,500 monthly.

The Annie Laurie properties consists of a total of 73 claims, covering an area of 1,300 acres; a cyaniding mill of the capacity already mentioned, two water power plants located six miles from the mine, besides an auxiliary steam plant. The company generates its own electricity used in the operation of the mine and mill.

The Annie Laurie mine has in tunnels, drifts, stopes, sublevels, raises, etc., over four miles of workings and practically all is in pay dirt.

The average cost of mining and milling has been estimated to be about $3.50 per ton, or to better illustrate $10 ore leaves the handsome profit to the owners of some $6.50 per ton.

There are over 300 men employed in the mine and mill at the present time.

ANNIE LAURIE MILL.

On reaching the mill from the mine the ore is fed over grizzlies, passing directly to the Gates' crusher and then to the ore bin, which supplies the dryer. There are two discharge gates at the lowest point of this bin, and through these the ore is passed by gravity to the Argale tubular dryers, where it is dried sufficiently to admit of crushing and grinding in the rolls. The fine crushing department is separate and complete in itself, the ore from the dryers, after passing through it, being delivered into a large pulp bin, at which point the leaching department takes it in charge. In this fine crushing department, then, there is one 6x20 Sturtevant roll jar crusher, each running in connection with overhead screens.

The reduction is effected gradually, the first set of rolls taking the coarsely crushed ore which has been delivered from the dryers and breaking it up into smaller particles. It is then elevated and screened, the oversize going to another set of rolls to be there still further reduced in size. After more screening and crushing the ore is finally delivered into the pulp bin before mentioned, all of it having passed through what is known as a "40-mesh screen." This fine state of division is necessary to break open the particles of quartz surrounding the gold and so expose the metal to the action of the cyanide solution with which it comes in contact in the subsequent leaching process.

The leaching department has been twice extended since the starting up of the mill and is now capable of handling a larger tonnage than ever before. The equipment consists of 16 steel tanks, varying in capacity from 180 to 240 tons, and each is provided with a filter bottom and Argale gate valves through which the tailings are sluiced when the extraction of values is complete. The ore is taken from the pulp bin in cars and dumped into the tanks over a system of distributors which prevent the ore from packing and at the same time spread it evenly over the bottom. The benefit of this is to be seen later on in the increased rate of leaching and better displacement of solutions which is thereby effected. While the tank is filling, a solution of sodium cyanide is at the same time soaking its way up from below, and not long after the tank is fully charged the solution begins to make its appearance on the surface. It is allowed to stand in contact with the ore for a number of hours, during which time most of the gold and silver is taken into solution. This gold and silver bearing solution is now drawn off from below and piped to the precipitating room. After precipitation the cyanide solution passes on to the sump tank, where it is brought up to strength again by the addition of fresh cyanide in the solid form and pumped up into the stock tanks by a centrifugal pump. From here it is led on to the top of the ore in the leaching tank where it completes the work of extraction, and at the same time, washes out or displaces the gold and silver bearing solution retained in the charge.

The solution first brought into contact with the ore is known as "strong" solution and varies in strength from time to time as the nature of the ore and laboratory tests would indicate. There is another solution in use too of a different strength—roughly speaking, of about half the serength of the first—and this is called "weak" solution. Besides performing somewhat the same duty as the other it displaces this "strong" solution from the charge, and, in this way it can be kept separate for its own particular share of the work. In a similar manner, clean, pure water is piped onto the top of the charge and allowed to filter down through for the purpose of removing the "weak" solution. Each displacement of solution passes through metallic zinc, cut up into fine threads or shavings, and there the precious metals are deposited in the form of finely divided metallic slimes, which are inky black in color. These slimes are "cleaned up" periodically, and, after acid treatment and other operations incident to refining, are melted into bars weighing on an average about 100 pounds each. These bars regularly find their way to Uncle Sam's coffers, and are as regularly converted into dividends payable to the Annie Laurie's fortunate shareholders.

But to go back to the treatment of the ore in the tanks, which was all but finished when it was left; the values have been extracted, the cyanide has been washed out and recovered, and it remains to get rid of the tailings in order to make room for a new lot of ore in the tank. The gate valves are raised, and a stream of water is directed onto the tailings, which are thus washed through the valves into large wooden launders. These conduct the tailings to the plate house, situated immediately below the mill, where they pass over a series of amalgamated copper plates. Sufficient time is given in sluicing to allow any coarse particles of gold left in the tailings to come in contact with the surface of the plates and to be amalgamated and caught. The scheme of amalgamation after cyaniding is a novel one, so far as dry-crushed processes are concerned, but the wisdom of the step has been more than conclusively proven since its adoption. The tailings, after leaving the plates, are flumed a considerable distance and impounded behind a dam, and to prevent it from contaminating the waters of the creek which flows past the mill. A rather unique feature in connection with the disposal of the tailings is the suspension bridge over which they pass on their way to the dam, for, as far as the writer is aware, it is the only one of its kind in use anywhere for a like purpose. It has a span of 270 feet and at the center its height above the creek is over 100 feet. It is quite a novelty on the landscape and never fails to attract the attention of the visitor to the camp.

The process in use is known as the McArthur-Forrest cyanide process, and that it is well adapted to the ore in question is evident when the record of the mill since its commencement is considered. Unlike many, the directors of the Annie Laurie company spent much time and money beforehand in determining just what process or modification of a process would be most suitable and subsequent operations have amply borne out all that was even promised in the preliminary tests by the McArthur-Forrest representatives.

During October of 1903 the position of acting manager of the company was tendered to and accepted by A. E. Hyde, Jr., of this city, who had previously filled the position of engineer for the company. His conduct of the interests in his charge during that time proved so satisfactory to the officials of the company Mr. Hyde was tendered and accepted the position of general manager of the company's vast interests at Gold Mountain. His record at the Annie Laurie has won for him the reputation of being one of the best mining engineers as well as one of the most conversative and sucessful mine managers in the state.

The milling department, as well as the power plants are in charge of O. Wiser, while the leaching department is presided over by A. W. Russell. Both gentlemen are thoroughly competent in the positions they hold and are valued members of the staff of Mr. Hyde.

THE SEVIER PROPERTIES.

A couple of miles west from Kimberly is the Sevier mine. The enormous outcrop of ore on the Fish creek divide is an object of curiosity to all beholders. The north face of the mountain is an ore slide many feet deep, and is the product of ages of disintegration of the vein on the apex of the ridge. Tunnels 1, 2 and 3 have been driven in to the vein upon which thousands of feet of levels have been run. The vein has an average width of about 10 feet, and 400 assays on samples from No. 2 give average returns of better than $14 per ton in gold and silver.

Chas. Lammersdorf was the former owner, and who sold out for a comfortable fortune to the Sevier Consolidated Gold M. M. & P. Co. Seymour W. Tulloch is president, W. E. Maison, vice president, and Capt. H. C. Lawrence is secretary, treasurer and manager.

Mr. Lammersdorf has retired to the progressive city of Richfield, where he and Mrs. Lammersdorf will spend the remainder of their declining years.

Capt. Lawrence has built a 60 ton mill on the Sevier property, and will soon have things in shape for grinding out the enormous wealth that is known to exist in the Sevier hill. An enlargement of the plant is provided for by the installation of a 250 ton crusher. Cyaniding, amalgamation and concentration are the combined processes for extracting the values.

Captain Lawrence is authority for the statement that recent explorations have demonstrated that the "middle" vein is 120 feet wide and that the entire product therefrom will pay to mill. The so-called "middle" vein is a separate lode and parallels the one from which the mill is to be now supplied.

In close proximity to the Sevier are the Holland, Lone Tree, Wheeler and other valuable properties. Further south are the Trapper's Pride, Signal Peak and other mines that will some day pour streams of wealth into the coffers of owners.

DEER CREEK DIVISION.

A detailed description of the mines of Gold Mountain would fill a good sized volume. But it would be an injustice to the district to ignore the merits of the Deer Creek division which, as before indicated, lies to the east of the phonolitic belt and extends to the Sevier river.

At the head of Deer Creek canyon, the Annie Laurie Extension Mining company is making a hard and intelligent effort to open a mine. The ore for which the Extension people are going, crops in the form of a strong vein on the crest of the phonolite divide. Well down on the east side a long tunnel is being driven to the west in birdseye porphyry.

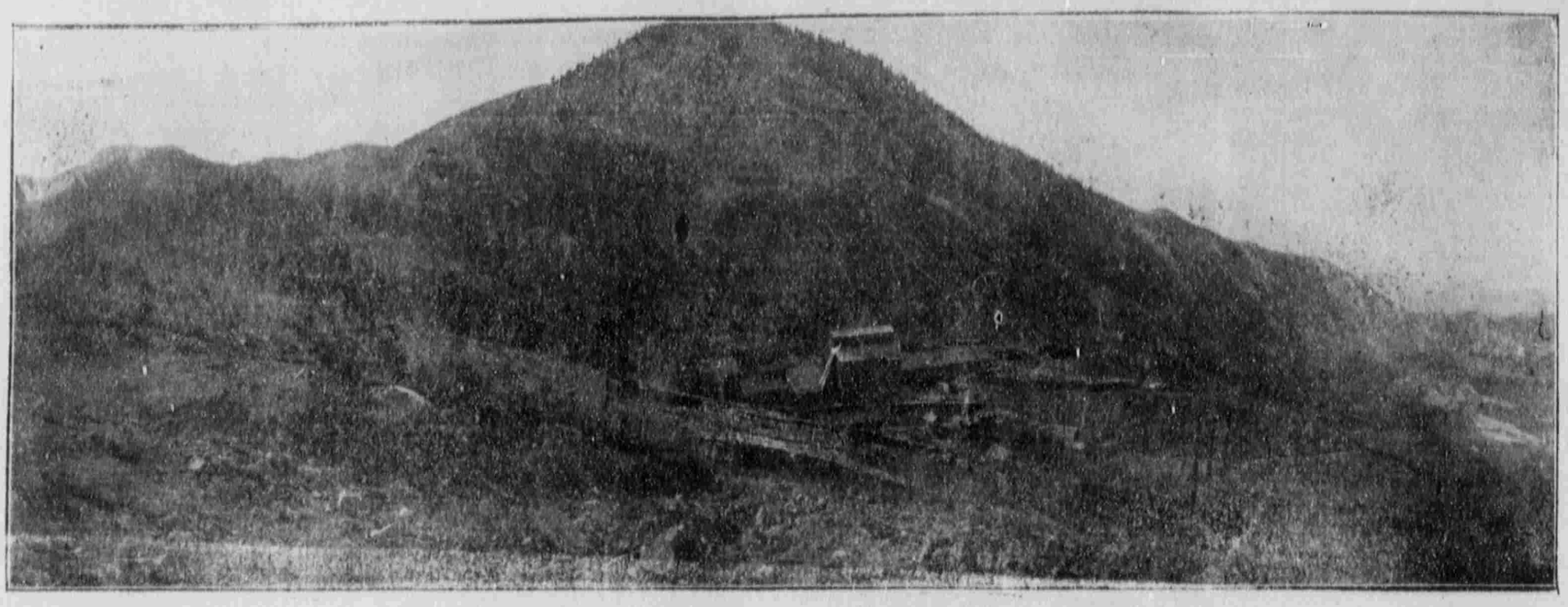
The tunnel has frequently cut seams of native copper, of such purity that it readily bends without breaking. The great and well-founded hope of the company is, however, in the results that are reasonably certain to materialize when the phonolite contact is cut at a depth of more than 1,000 feet below the ore croppings just alluded to. From a purely geological standpoint Manager L. H. Outzen is amply justified for the "faith that is in him."

To the north of the "Extension" about two miles are situated the Silver King and Gold Queen properties owned by the Darger Bros., Singleton and others of Provo. Like the Annie Laurie Extension, those groups lie to the east of and close up to the phonolite belt. The groups have been held under assessment work during many years. No systematic work has yet been undertaken, but enough has been done to show up wonderfully rich gold ore and to demonstrate that fortunes are within reach of determined efforts.

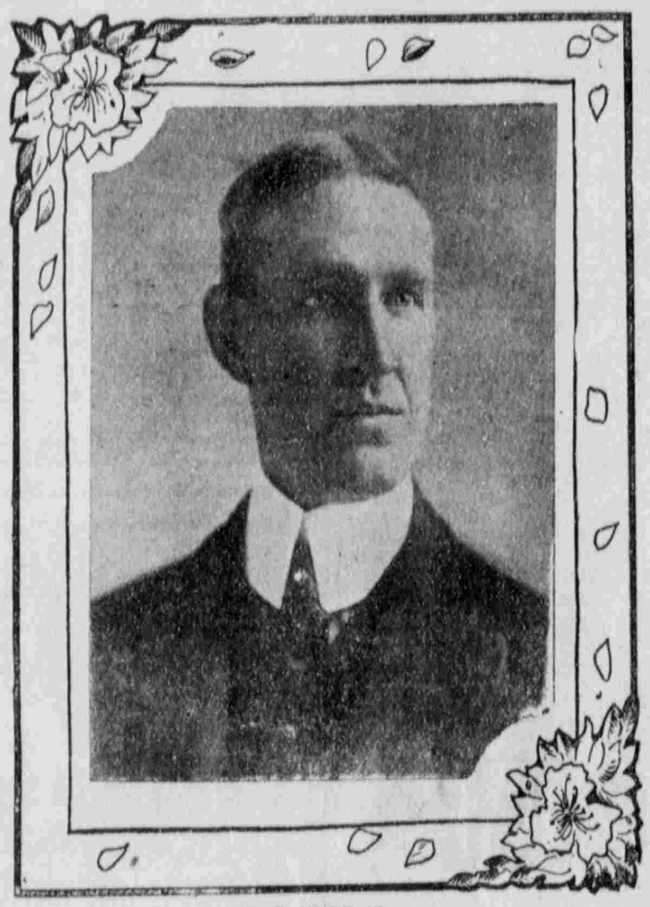
PROMISING UNEXPLORED FIELD.

To those who have studied conditions along the phonolitic belt, there is an abiding conviction that it presents the most promising unexplored field for mining enterprises to be found in the United States.

The Gold Mountain Development company and the Richfield M. Company are centrally situated on Deer creek and have ground which shows plenty of ore of good quality. In fact, from the phonolitic divide, east to the Sevier river, the country is highly mineralized, and presents an inviting field for prospecting and development work.



ANNIE LAURIE CYANIDE MILL AT KIMBERLY, UTAH.



A. E. HYDE JR.
General Manager of the Annie Laurie Mining Company.

Mount Baldy Gold Belt and Its Mines

TO the geologist and practical miner and prospector, who reason from cause to effect, the Mt. Baldy range presents every condition necessary to the presence and permanency of vast bodies of mineral wealth.

The tremendous forces which lifted the Mt. Baldy range into cloudland left a great scar at its western base, known as the Beaver fault, and along its eastern base and extending for more than 100 miles northerly and southerly another great line of displacement, known as the Sevier fault. Also, along what is now the crest or apex of the range there was another break or fracture, extending downward to the earth's melted interior, and is marked by a great phonalitic dyke or belt, which extends from Gold Mountain southward a distance of some 8 to 10 miles. Numerous lateral fractures projected out easterly and westerly and are also marked by pholitic dykes, and were the last of the successive eruptions of rhyolite, porphyry and similar volcanic material. Fissuring and faulting of the quartzite and lower carboniferous limestone, which predominate along the east front of the range, are conspicuously in evidence over a distance of many miles. Such, in brief, are the ideal geological conditions which prevail in what is familiarly known as the Marysvale country.

BACK IN THE SIXTIES.

It was in January, 1866, that Capt. Jacob Hess of Manti, Utah, entered the little valley of Marysvale. Capt. Hess was one of that famous little band which washed the first gold from the auriferous gravel of California. The intelligent and observing prospector, generally innocent of geological information, is guided in his search for the precious metals by the similarity of formations and other familiar conditions, and the captain was an unusually intelligent and observing man.

SOME GEOLOGICAL FACTS.

The present valley of Marysvale was once a post-glacial lake, a tributary of the great Lake Bonneville. The water of the former was held back by obstructions in what is now known as Sevier canyon, north of Marysvale and now jointly occupied by the Sevier river and the Denver and Rio Grande railroad. Both river and railroad are indebted for their right of way to the great Sevier fault, which cleft the mountain link which, except for the canyon, connects the Gold Mountain portion of the Mt. Baldy range, with its less pretentious and parallel range to the east of Sevier valley and Marysvale.

Five distinct shore lines to the southwest of Marysvale prove that five sudden subsidences of the lake took place before the valley was measurably drained, and became a marsh or a fine tract of meadow land. As the water receded, the waves gathered the debris, brought down by glaciers and torrents from mountain sides and gulches, and after rounding, polishing and puluverizing the rock fragments, formed a succession of smooth, wave-swept benches, each with a sharp escarpment facing th east, and north. It is under the protecting brow of the lowest of the benches that the picturesque little town of Marysvale nestles within a natural grove of cottonwoods and towering pines.

CAPT. HESS IMPRESSED.

The first thing that probably impressed itself on the mind of Capt. Hess was that it was a mineral country. Very likely the second impression was that those wave-washed benches ought to contain placer gold. Pannings from various points convinced him that untold millions of dollars were diffused through the bench gravel. A ditch from Bullion creek was dug and water conveyed to the top of the second bench. Sluice boxes were put in and an effort made to collect the elusive grains of gold. Owing to the primitive methods then in vogue the enterprise proved a failure, and since then no serious effort has been made to collect the golden sand sowed by the busy waves of the ancient lake.

DID NOT DISPAIR.

Foiled in his efforts to wrest the gold from the gravel, Capt. Hess and his companions resolved to find the source of the yellow god of the "gold bugs." They penetrated the almost impassable depths of Bullion canyon, and in January, 1866, located the Webster lode claim, now owned by L. U. Colbath, the well-known mining man of Salt Lake City. Numerous northerly and southerly veins carrying lead, copper, silver and gold were discovered, and Marysvale became suddenly famous.

THE FIRST MILLING PLANT.

A two-stamp mill and a donkey engine were imported from Chicago, and the impossible task of reducing ores carrying a combination of metals was undertaken. A rude smelter stack was then erected. Battered and scarred by the storms of more than 30 years the old chimney yet stands as a monument to the misdirected but determined efforts of those old heroes who, while bombarding the indurated rock with black powder that cost nearly one dollar per pound, were compelled to hold Black Hawk and his marauding band of redskins at bay. A portion of the roster of those old-timers, as the writer now remembers them, is as follows: Jacob Hess, ——— Washburne, ———Murray, James Stark, afterwards probate judge of Piute county, Fred Haller, Fred Hamil, D. C. Tate, Jed Taylor, who subsequently joined the "Mormon" Church and became the first Bishop of the Marysvale ward, Dr. Dennis, Miles Durkee, and Ed Foisy. Durkee and Foisy are the only survivors of that squad of Piute county argonauts, and, like their smelter stack monument in Bullion canyon, are somewhat battered and disfigured by the hard hand of Father Time, but are still in the ring. To illustrate the indomitable perseverance of those pioneers, it is well to add that Miles Durkee has recently tackled the same old ditch and placer ground and, with that perennial hope that never dies except with its owner, is again striving for the same object abandoned 37 years ago.

After successive failures to coax the goddess, Fortune, from the rock-ribbed chambers of Mt. Baldy, each of the pioneers secured a ranch and settled down to farming and stock raising. As a mining camp, Marysvale also settled down to a condition of pastoral somnolence.

SILVER REEF MINERS.

A number of miners who deserted Silver Reef during 1878 invaded the hills west of Marysvale and the famous Deer Trail was discovered. Carload after carload of ore running into the hundreds in lead, silver and gold were shipped to Salt Lake. The greater portion of the high-grade ore was extracted, but there was opened up a vast blanket deposit of ore lying in a quartzite and lime contact. The deposit in places swells to a thickness of 60 to 80 feet and will average 30 to 40 feet thick of ore, averaging $10 per ton in gold and silver. A million and a half dollars "in sight" is a conservative estimate of Deer Trail wealth. The property is owned by O. J. Salisbury of Salt Lake City. That the great body of ore does not extend on into the mountain has been fully demonstrated by several tunnels along the contact, and the source of the ore is one of those interesting problems that so often confront the man who mines. Whatever its value, a solution will be ventured. As before stated, the quartzite floor and lime roof are in bedded form. To the north of the great ore body the quartzite and lime are cut by a porphyry dyke that extends from the base to the top of Deer Trail mountain. The quartzite underneath the ore body is split with innumerable fissures, and conditions indicate that many of them were channels for ascending ore-bearing solution. Indeed, some of the fissures contain seams of pure galena. Such conditions would seem to two very plain conclusions: First, that the porphyry dyke was the cause of the mineralization of a contact some distance below the exposed ore body, and second, that the upper ore body derived its values by the upward flow of solutions from the inferred contact beneath. Another interesting feature is that no effort has been made to find and explore the contact on the north side of the dyke, and where probable identical causes produced identical results. Conditions at the Deer Trail would seem to justify the belief that, like Leadville, great bodies of ore exist in bedded form at no great distance below what is called the Deer Trail contact, and that on both sides of the dyke colgssal fortunes await the advent of some one with nerve as well as money for intelligent exploration. Negotiations are now pending whereby the old Deer Trail will again come to the front as a great producer.

A SECOND BOOM CAME.

Another boom struck Marysvale when the Dalton was discovered in Horse Heaven, along in the early "nineties." A fortune was taken out at the "grass roots." At about 60 feet in depth the vein was found in a faulted condition and while fair milling ore is abundant, the surface deposits of rich ore has not been duplicated. The great easterly and westerly view is fully twelve feet wide and its showing at nearly 300 feet deep is such as to put the question of permanency beyond all doubt.

DISCOVERY OF THE WEDGE.

Subsequently, the Wedge was discovered a half mile or so southeasterly from the Dalton, and created great interest by the richness of the ore.

Notwithstanding the marvelous showing of ore on the surface, only one or two determined efforts, backed by a combination of brains, experience and money have been made to determine the questions of value and permanency. In many instances great sums of money have been recklessly expended with no definite aim or results.

DISPLAY OF INCOMPETENCE.

Since 1890 Marysvale has been the victim of gross mining incompetence. Where one tunnel would have determined the question of ore at a given point three tunnels have been driven by the same company towards practically the same locality, and then abandoned because funds could no longer be coaxed from eastern shareholders. A hundred thousand dollars have thus been spent where $5,000 invested in a shaft on the vein would have determined all that will be accomplished by the completion of the long tunnels at an expenditure of another $100,000. A lot more truth along the same lines could be written in answer to the oft asked question "What's the matter with Marysvale?"

A BRIGHTER SIDE.

There is, however, a brighter side to the question, and is found in the single-handed efforts of local men, and in the prudent course of small eastern companies.

SOME OTHER PROPERTIES.

At the present time the Aldebaran Mining company of Missouri is working a small force of men on a fine ore-bearing contact about four miles southwest of the Deer Trail. Under the supervision of B. T. Ashby a winze is being sunk near the face of a 700 foot tunnel which, all along its course produces ore running from a few dollars up to thousands of dollars per ton.

In the south fork of Bullion, away up near the great phonolite belt, Ben Reynolds and Scott McCullough are developing a 40-inch vein of high grade gold-bearing rock. The property is known as the Mountain Star, and gives almost certain promise of becoming a bonanza.

L. H. Outzen is working a small force of men below the Mountain Star in the south fork.

The Gold Development Mining company is erecting winter quarters and preparing for exploratory work well up in Bullion canyon.

The old Webster property is being worked by Buler and Rudd under a lease, and ore is being extracted and marketed.

IN SEVIER CANYON.

Down in Sevier canyon, some seven miles north of Marysvale, the B. W. & H. is developing and shipping its usual output of high grade ore.

Across the canyon a few miles to the east of the B. W. & H., the Bradburn Mining company is developing a most promising eight foot vein of gold ore.

To the south of the Bradburn a mile or two the Midnight group, another flattering property, is being opened by W. J. Heki.

There are numerous other properties of good local repute, idle and active, that could be mentioned.

Nowhere on the earth has Dame Nature provided more perfect geological conditions for rich and permanent mines than are found in the semi-circular belt that, from Ten Mile canyon to the south, bends around Marysvale on the west and north. In the years to come Marysvale will cease to be the football of incompetent mining fakirs, and will take her place among the really great mining districts of Utah.

Utah Con. Smelter And Its Equipment

THE smelting plant of the Utah Consolidated Mining company consists of 20 McDougal roasters, nine reverberatory furnaces, three converter stands, and a power house containing one 300 horse power blowing engine and two generator sets, consisting of 400 horse power Nordberg tandem compound engines directly connected with 300 k. w. Westinghouse generators. There is also a sampling mill with a capacity of 1,000 tons per day; electric and machine shops, and ore and coal bins; the latter with a capacity of 2,500 tons of ore and 1,000 tons is driven electrically or by hydraulic power. The course of treatment for the ore is as follows: Arriving in steel hopper bottom cars of 50 tons capacity from the mine, it is dumped into receiving ore bins; from there is passed to the sampling mill, where it is all crushed to a size not exceeding seven-eighths of an inch and lifted into bins. Electric tram cars draw from these bins and deliver the raw ore to the receiving bins of the McDougal roasting furnaces. The ore then passes through the roasters, where a large proportion of sulphur is driven off and the roasted ore drops again into hoppers. From these it is drawn by electric tram cars and delivered into the receiving bins of the reverberatory furnaces, where it is smelted, the slag being drawn off in slag cars drawn by electric locomotives, and the matte being run out into converters which are placed in position by an overhead electric crane. The filled converters are transferred by this same crane to converter stands, where the matte is blown up to blister copper. This is poured into cast steel moulds on traveling cars propelled by hydraulic power, and when cooled these are loaded in railway cars for shipment to the east to be refined and the gold and silver separated from the copper contents. The capacity of the plant is about 700 tons of raw ore per day, and the product is about 50,000 pounds of bullion daily.

Properties Owned by Tne Bingham Con.

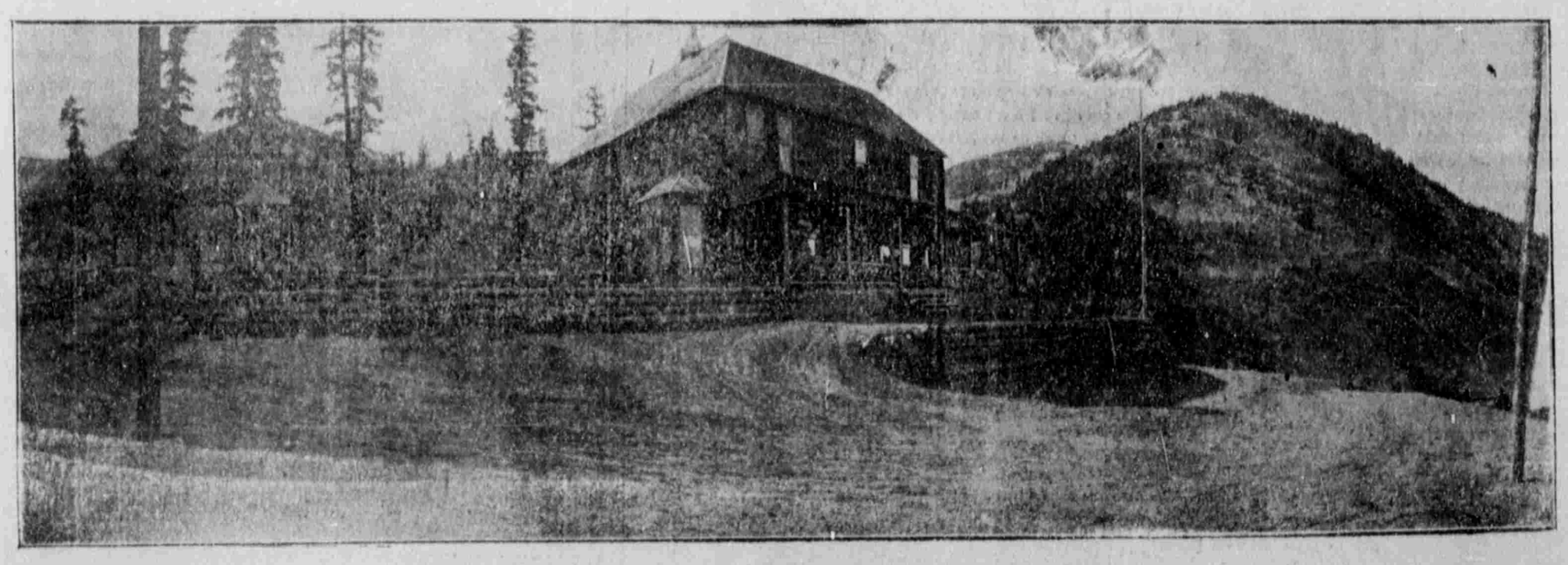
The properties of the Bingham Consolidated consist of the Dalton & Lark and Commercial mines in Bingham, the Eagle and Blue Bell mine in Tintic and the smelter in operation at Bingham Junction.

The Dalton & Lark properties are situated on the southeast side of West Mountain Mining district, consisting of the Antelope, Miners Dream, Dalton & Lark, Lead Mine, Sampson, Brooklyn, and Yosemite No. 1 mines, embracing 400 acres; have three veins paralleling each other, a distance of about 800 feet each; namely Brooklyn, Lead Mine vein and the Lark vein, tapped by the Mascotte tunnel, 7,500 feet long. The lowest workings are 1,100 feet from the surface in the Lark vein. There is about 30,000 feet of drifts in those properties combined, and have very large ore reserves. The equipment consists of a 250 H. P. air compressor, 75 H. P. electric generating plant and an electric railroad.

The Commercial mine, is situated in Bingham Canyon adjoining the United States properties, and is operated through three tunnels; the equipment consists of two Rand air compressors driven by team power. The ore exposed at the present time will furnish a large tonnage for a number of years.

The Eagle & Blue Bell, is situated at Eureka, and is operated through a 1,100 foot tunnel and a shaft at the end of the tunnel. The mine is opened to a depth of 800 feet from the tunnel. This property is producing about 75 tons of ore per day.

The smelter is at West Jordan, or Bingham Junction, and has four blast furnaces, with a capacity of about 900 tons of ore per day; two converters stands, one 1,000 H. P. blowing engine built by the Rarig works at Columbus, Ohio, of about 1,500 H. P. This power is furnished by the Utah Light & Railway company. The smelter is equipped with all the necessary office buildings, laboratories, electric slag haulage, authomatic sampler, and dumping bins.



THE "LODGE," ANNIE LAURIE MANAGER'S HOME OVERLOOKING KIMBERLY.