

The Big Copper Properties OF State Senator Lewis

It must be generally admitted that the bringing of the great copper belt of Beaver county to the attention of the world has been due largely to the energy and indomitable pluck of State Senator Arthur B. Lewis.

Others have figured conspicuously in this region, but Senator Lewis set the ball in motion when he succeeded in launching the Majestic Copper Mining and Smelting company, with which he was actively identified until during the present year, when he retired to give his attention to the organization of other propositions of apparently equal merit in Beaver county.

Until the appearance of Senator Lewis in the southern field, it had lain dormant for years and, with the exception of the Horn Silver, at Frisco, there wasn't an active mine in the whole of Beaver county. Prospectors were found in the hills during the summer months but no work of an extensive nature was carried on anywhere until the advent of the Majestic, a few years ago.

The senator has always had great faith in the future of the Beaver country and while "so-called experts" were turning it down time and time again, his faith remained unshaken. He believed the country would cut an important figure in the world's production of copper and there is everything to indicate that his prognostication will come true. Recent developments there certainly ought to be a source of a whole lot of discomfort to the men sent there in times past to examine the region who staked their reputations on their reports that the deposits were all on the surface, and that the veins did not go down. Recent events have completely disproven this theory for the fact has been clearly demonstrated in the Cactus, Old Hickory, O. K. and other mines that as depth has been attained the ores become richer and the bodies more extensive.

THE ROYAL PROPERTIES.

Senator Lewis has displayed a faculty of getting hold of good things when he became identified with mining in Utah. For the Royal Gold and Copper company, organized during the present year with a capital of 1,000,000 shares at a par value of \$10 each, he has grouped together, it is stated, nearly 2,000 acres of ground located in Beaver, Iron and Washington counties. Out of this probably 1,000 acres are located in Beaver county and in which is included the Montreal, Skybo, Rebel, Mammoth, Red Warrior, Atlas, Montic, Nello, Beacon, Lady Bryan, Star Mountain, Wild Bill and Burning Moscow groups, located in the Rocky, Beaver Lake, Star and North Star districts. These comprise a grand galaxy of properties, many of them bear enviable shipping records and were the scenes of much activity in the early history of mining in Beaver county; while in the others, the surface showings give indications of greater riches below.

Generally speaking, the Royal properties are strikingly promising and, situated as they are, there seems to be no uncertainty about some of them at least, developing into great producers of wealth.

THE MONTREAL.

Included in the company's domains is the Montreal group of 17 claims, five of which are patented. This property was bought by Senator Lewis for the Royal company from the Glasgow and Western Exploration company, a Scotch concern. The Montreal group is situated north and west of the Old Hickory group of the Majestic company, covering extensions of the productive veins of the latter which are now being drawn upon to feed the furnaces of the Majestic smelter at Millard. The surface showings of the Montreal are immense. The former owners of the property prospected the ground quite thoroughly, but never did find a continuation of the Old Hickory vein, where extension of ore is in progress, shows a width of 150 feet while further up the mountain is as much as 400 feet in width, containing ore of a milling grade which, it is said, is quarried right off the surface and treated to a profit. There are other veins displaying grades of higher grade. The richer copper ores are usually covered by an iron capping. The company has just completed the grading and will shortly install two hoists and gasoline engines, one of 40 and the other 15 horse-power, capacity, in making the excavations for the larger plant a good smelting furnace of ore was exposed. This plant will be located at short distance north of the principal Old Hickory workings where a shaft will be put down to a depth of several hundred feet. The fact that the Majestic company is making money out of ore running from 3 to 7 per cent copper leaves no doubt that the Royal will be prepared to do the same very shortly, or when smelting works are provided for the treatment of the product, the ore will carry a high grade of copper and the iron excess renders the treatment easy. In the 70's, when a smelter was operated at Millard for the lead-silver ore of the Star districts, iron ores were produced for smelting purposes, some of it running as high as 60 per cent iron. The Montreal is located in the Rocky district.

REBEL HAS A RECORD.

The Rebel group was one of the first and was the stepping stone to wealth for the late Allen G. Campbell. Mathew Cullen and Dennis Ryan, familiar figures in these parts in the pioneer days, the property contained some very rich deposits of silver-lead ore and while Campbell and associates operated the mine it is said to have produced about \$200,000. The property was active between the years 1872 and 1875 and the enabled Campbell, Cullen and the Rebel group to get possession of the Horn Silver mine at Frisco, discovered about 1875, and to work it; shortly afterwards they sold a controlling interest in the mine done at the Rebel property in the early days; the ground was "gold-tracked" and the attempt was made to extract ore; while the deeper workings did not exceed 80 feet. Some of the product was hauled to Salt Lake for and near Millard the plants operated at part of it. Leasers have made money in working the ground since.

MAMMOTH WORKED IN 70'S.

The Mammoth, now known as the Waterloo group, has a history. It was an old producer and is said to have enriched its former owners to the extent of about a half million dollars. This ground, consisting of 150 acres, is



located in the Star mining district, 10 miles southwesterly from Millard. Back in the 70's the property was owned by James Lowe of Beaver and others, and they built the Troy smelter for the treatment of the ores. The property has since been worked intermittently by leasers; until it became a part of the Royal domains.

ATLAS OF STAR DISTRICT.

The Atlas group is also situated in the Star mining district, about a half mile from the Mammoth; it adjoins the Montreal and the two groups consist of 14 claims. The Atlas has the deepest workings in Beaver county outside of the Horn Silver mine at Frisco. Ore was followed in an incline shaft for a distance of 500 feet and besides being rich in lead and silver, gold values to the amount of \$20 to the ton were obtained. The Atlas as well as the Montreal can be relied upon to furnish high grade ores. About 200 tons await shipment at the latter.

THE OLD CREEDMORE.

The Nellie group lies almost adjoining the Atlas and Montreal on the west. It, too, was a producer in the early days of the camp. It was known then as the Creedmore, and was located by John Forgie of Millard, who is authority for the statement that it sold a producing record of \$15,000. He sold a half interest soon after location, to Allan G. Campbell, and the two shared in the profits. Mr. Forgie said to a "News" representative a few days ago that the "Creedmore" was always a "winner" and that when his mining ventures elsewhere did not pan out he could always go back and work this property and make money. It was a place of last resort for him when financially embarrassed. The mine is productive of silver-lead ores. The Royal company has a force of men engaged in developing this property.

BEACON RICH IN COPPER.

The Beacon is situated in the copper section of the Star district and in a vein averaging eight feet in width was struck recently, since being acquired by the Royal company. The find was made in the upper tunnel. The early work on the property was done in search of silver-lead ores. Although there were splendid copper showings in evidence at the time this class of ore was not wanted, there being no way to handle them then. The tunnel referred to is a new one and will tap the main ore bodies 400 feet from the surface. The group consists of eight claims.

LADY BRYAN COPPER LEDGE.

Just to the east of the Nellie and Beacon is the Lady Bryan group, also the Star Mountain group, the two consisting of about 100 acres. The property was purchased from the Campbell estate, and Jacob Montic, and has produced considerable silver-lead ores. On the Lady Bryan is a large copper and iron ledge which is to receive attention from the present management. Considerable iron ore was shipped from here to the Millard smelters years ago for fluxes.

WILD BILL GROUP.

The Wild Bill group was recently bought for the Royal by Senator Lewis. This property is located about nine miles from Millard, in the Star district, and has been productive of considerable ore in the past. Shipments made during the present year netted good returns. The past production is placed at \$40,000.

BURNING MOSCOW MINE.

The Burning Moscow, situated about three miles from the Wild Bill, and 12 miles from Millard, is also an old time producer, and is said to have a record of an output of \$50,000. The last two named mines were once owned by Mathew Cullen and James Barratt, and the old workings show considerable available ore in sight. Like in the case of nearly all other properties worked in the early history of the camp, nothing was done systematically. Both these mines can be made heavy producers within a very short time.

It is the intention of the Royal company to inaugurate a very vigorous campaign at all its properties in the near future. An order has been placed for four powerful gasoline hoists, some of which have already been installed. The officers of the Royal company are: A. B. Lewis, president; C. J. Caughey, vice president; Frank Knox, treasurer; Joseph Henshaw, secretary. All of the officers are residents of Salt Lake, except Mr. Caughey.

THE IMPERIAL MINES.

Located in the San Francisco range of mountains, just west of the town of Frisco, and included in the same mineral belt as the Horn Silver and the Cactus mines are the Imperial and Massachusetts groups, owned by the Imperial Gold & Copper Mining company. The properties consisting of a large number of claims.

HAS A BRIGHT FUTURE.

As a copper producer, the Imperial undoubtedly has a very promising future and it would not be surprising to see it develop into and become an important rival of the Cactus, which is declared by its owners to be the most wonderful copper mine in the state.

The surface showings on the Imperial are immense; the veins are generally extensive and the ores of a milling grade. Some of the veins, however, are richer than others; this is particularly true of the Massachusetts, out of which Senator Lewis, since being connected with the property, has shipped copper ore, containing values in gold and silver, which bordered on the sensational.

By those who are acquainted with mineral belt of the San Francisco mining district, the Imperial group has long been considered with favor. From the upper workings, it is stated, in the past ore to the value of \$80,000 has been shipped to the smelters. The principal workings at this time

consist of a tunnel 1,122 feet in length, run from an advantageous point on the south side of the mountain and is intended to cut the ore bodies exposed in the upper workings 150 feet deeper; it is now within 70 feet of the objective point and has already penetrated a vein of excellent milling ore 45 feet in width that will probably average from 4 to 6 per cent copper in addition to the other metallic contents. An incline shaft was sunk at the entrance to the lower tunnel to a depth of 120 feet, from the bottom of which a drift was run on ore for 110 feet.

It was the original intention of Senator Lewis to run the main working tunnel from the Frisco side of the mountain, but the project was abandoned pending systematic development of the property. The plan may yet be carried out, yet the tracks of the proposed extension of the San Pedro railway to the Cactus mine will pass within a mile of present workings.

The company is capitalized for \$50,000 shares of a par value of \$10 each, and the officers are A. B. Lewis, president; J. P. Haynes, vice president and treasurer; C. F. Haynes, secretary.

COMET OF COPPER GULCH.

The Comet of Copper Gulch is undoubtedly a big mine; but it is yet too early to state into what proportions it is likely to develop. Its domains adjoin the Cactus group on the east and covers an extension to the veins which have responded so generously in the

development all the way down to the 600-foot level. The lowest workings of the Comet do not exceed 500 feet at the present time, but there is a world of milling ore already exposed. The grade is about the same as that developed in the Cactus and on the 100-foot level the larger vein was cross-cut for a width of 125 feet. The showings are astonishing among the most productive camps in all the west.

The Manhattan mines consist of two groups, making in all approximately 41 claims. The Stampede group, located nine miles west of Pochie, belongs to this company, aggregating in all 15 claims. In this group Manager Ed F. Freudenthal has opened up during the present year some extensive bodies of copper ore and to the extent that there is no longer any doubt about it becoming one of the big copper mines of the west. For years mining men considered the Stampede group of little value, except that the vast iron deposits there might at some future day become a

heavy shipper of iron ores, whenever the matter of cheaper transportation was solved. The Stampede group covers a low mountain and Manager Freudenthal explains that it is simply one mass of iron croppings. More specifically speaking, these great croppings are visible for a width of 1,000 feet and extend along for a distance of fully 4,000 feet, carrying values of from 45 to 55 per cent iron, together with small gold contents. The iron serves as a capping for the copper deposits, which fact has been demonstrated by recent developments.

ON THE PORPHYRY DYKE.

The Pochie group of the Manhattan company is located almost within the town limits of Pochie and along the porphyry dyke, out of which the owners of the Raymond and Ely, Yuba and other mines, produced all of \$20,000,000. The Pochie group consists of 25 claims.

IRON BY TRAINLOADS.

The Stampede group can be depended upon to keep up steady shipments of 1,000 tons of iron ores daily for an indefinite period and no doubt the company will derive a great deal of revenue from this source in the near future. The smelters of the Salt Lake valley need this character of ores for fluxing purposes, but at the present time transportation charges are too high. This difficulty will probably soon be overcome by the extension of the San Pedro railway from Calientes, a distance of about 20 miles. Senator W. A. Clark has had his experts in the camp for some time past and the probabilities are the Montana senator will figure as conspicuously in the re-awakening of this camp which has in other old abandoned districts.

The presence of his men has had a good effect and citizens of the district were more hopeful of the future.

While no extensive work has been done on the Manhattan properties during the year, plans have been outlined for a more vigorous campaign of exploration during the next. Among the improvements noted is the installation of a gasoline engine and hoisting plant. The Stampede group is developed by numerous open cuts, shafts and tunnels.

SCENE OF STIRRING TIMES.

Pochie was the scene of some stirring times in the past. Away back in the 60's it was lively and its mine was noted for their richness. Its history, if told completely, would make an interesting story.

Will C. Higgins, the well known mining writer, has furnished the "News" the following on the discovery, growth and subsequent decline of the camp.

THE FIRST DISCOVERY.

The Burke was the first mine found on Pochie mountain. This was in 1868 and the discovery was made by Indians, who reported their find to the residents of a small settlement 12 miles south, called Panama. The Panama people utilized this discovery by taking ore from the now famous Meadow Valley fissure, which was so rich and of such high grade that they ran it down to smelt in blacksmith's forges, the result, ing silver and lead bullion being cast into bullets, virtually making silver bullets with gold as alloy.

PROSPECTORS FLOCKED IN.

In 1869 the news of this wonderful discovery became noised abroad, and it was not very long thereafter before many prospectors flocked into the district from western Nevada and California, among the new comers being A. W. Raymond, at the time operating on Irish mountain in Lincoln county. Raymond at once bought the Burke mine and located the Raymond & Ely, which has since produced \$25,000,000 in silver, gold and lead. Upon the acquisition of these properties he took in with him, as partner, John Ely, and once began the extensive development and operation of these bonanza propositions, first putting in a five stamp mill at Bullionville, a mile north from the day it was started in 1870, of Panama, with which, with a 20 day run, he paid for the Burke mine, the mill, and all expenses attending the enterprise, the mill paying big money from the day it was started until it was closed down, four months later, when the plant was enlarged to 100 stamps. Soon after a big hoisting plant costing \$250,000 was installed at the mine, and a narrow gauge rail-

road was built to the mill. In the treatment of the ore, however, with the crude methods then in vogue, a most unsatisfactory recovery of the assay values was recorded, leaving a fortune in the tailings. It was estimated that from these tailings \$2,000,000 in profits could easily be taken.

A year after the Raymond & Ely had been in successful operation, Rob Morrison of San Francisco, bought the Meadow Valley group, on the truly wonderful Meadow Valley fissure, and erected a 30 stamp mill at Dry valley, 10 miles east of Pochie, and also built a hoist at the mine costing at least \$100,000, the property, before its close-down, producing \$14,000,000 and upwards.

In 1872 the Raymond & Ely and Meadow Valley had reached water level at a depth of 1,200 feet, the Raymond & Ely putting in a large hoisting pump costing \$250,000, which easily handled the water from the company's mine, as well as from the Meadow Valley, the Meadow Valley workings being maintained about twenty feet above the deepest level of the Raymond & Ely.

DOWNFALL OF CAMP.

On account of these conditions the Raymond & Ely proposed that the Meadow Valley people bear half the expense of pumping, the proposition being rejected by the latter company. Upon this refusal the Raymond & Ely drew their pumps and dewatered the Meadow Valley workings as well as their own, thus starting a bitter fight, which ended, after years of litigation, in the closing down of both properties. One of the factors associated with the close-down being the change of the character of ore at the water level in the Raymond & Ely, into a sulphide ore which could only be handled by smelting.

When the litigation had ceased the price of silver had fallen, the excessive charges for smelting and transportation precluded the possibility of ore being profitably handled, and the mines carry values of \$100 per ton, and finally the death of the two leading factors called a halt upon the immediate resumption of the operations. Upon the closing down of the Raymond & Ely and the Meadow Valley, two of the most famous mines of the district, the Creole, American Flag, Mazepa, the Pochie No. 1, the Newark and other mines followed suit, the activity of the camp just prior to this time being illustrated by the fact that twenty-one mines and mill whistles daily heralded the time for the beginning and discontinuance of labor.

During the period of activity and production of the Raymond & Ely, the Meadow Valley and other mines of this wonderful quartzite fissure, a great porphyry belt or dyke, paralleling the quartzite vein, was ignored and is only during recent years that its vast mineral wealth has been demonstrated and appreciated. Extensive operations in the Yuba mine and in the Pacific tunnel along the porphyry dyke showing three distinct veins, one on both sides and one in the center of the three ore bodies forming a junction on the 400, where a massive body of pay mineral has been blocked out.

THE PORPHYRY DYKE.

The porphyry dyke has been prospected to a limited extent only along its entire length, showing for a mile and a half a strong mineralized body carrying good smelting and shipping ores. It is now conceded by experienced mining men that the porphyry dyke is the mother lode of the district and the possibilities of the dyke can justly be estimated by the mammoth output of quartzite fissures by which it is paralleled.

FISURES IN QUARTZITE.

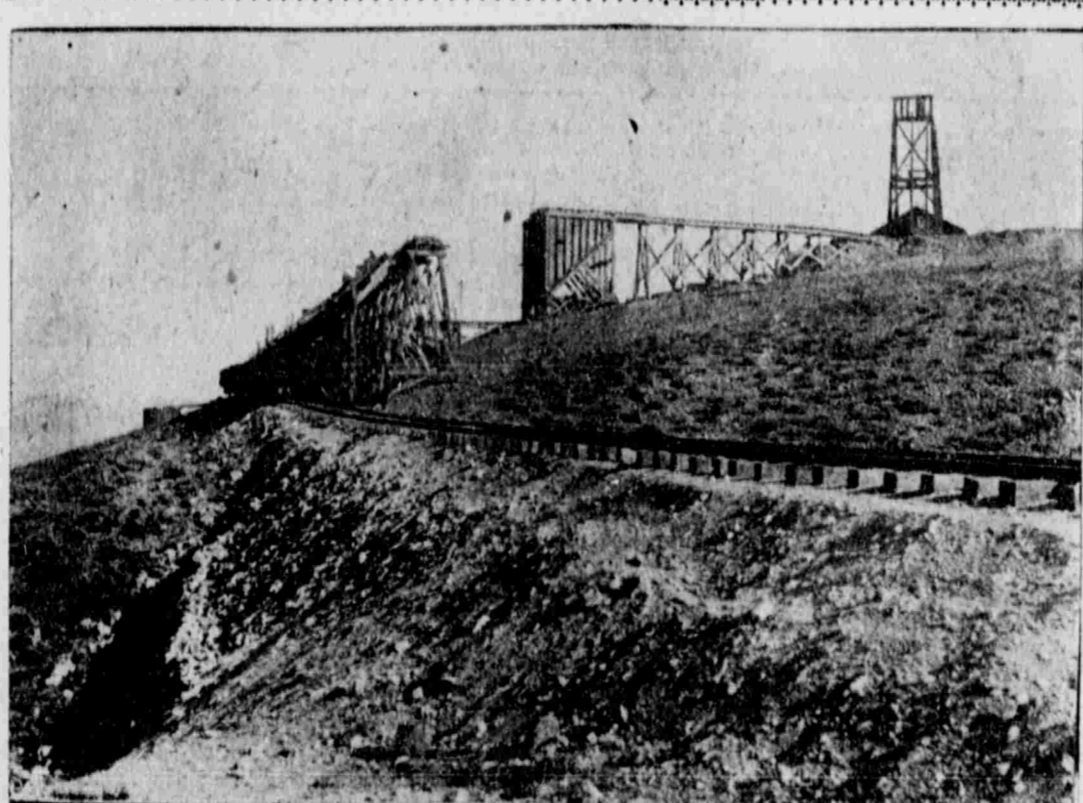
The formation of Pochie mountain consist of true fissures in quartzite, and it is on these that the principal mines of the camp are located. The most prominent fissures are the Raymond & Ely, Meadow Valley and the Deer Foot. The Raymond & Ely ledge are located the mine of this name, the Creole and the Burke. On the Meadow Valley ledge are located the Meadow Valley Nos. 3, 5, 7 and 9 mines, while paralleling the Meadow Valley and Deer Foot fissures is what is known as the porphyry dyke fissure. The porphyry vein being about midway between the two quartzite fissures, and it is on this porphyry belt that the Yuba and Pacific tunnel are located, the mountain being cut by a network of cracks, intersecting the porphyry zone, and on these there are numerous properties of merit, such as the King, Queen, Unta, Greenback, Vista and Treasure mines, and numerous other properties which have added their thousands to the world's circulating medium; the east side of Pochie mountain being fairly covered with claims, some of which, with shafts, drifts, tunnels and stopes while a multitude of smokestacks, or hoisting plants galore attest the wonderful activity which prevailed in this locality 25 years ago.

EARLY PRODUCTIONS.

At this late day it is difficult to ascertain the exact output of the mines of Pochie and Jack Rabbit. Existing records give an excellent idea of the amount taken out by the early operators. Since then, however, after the closing down of the principal mines, a large amount has been extracted by leasers, of which no account has been kept. And yet the output, by the companies, as given by smelter returns, by mill accounts and by very conservative estimates made, would fairly stagger those not familiar with the great mineral wealth of this section and the magnitude and richness of its ore deposits the data obtainable showing a production as follows:

Burke mine	.....	\$ 5,000,000
Meadow Valley	.....	24,000,000
Raymond & Ely	.....	37,000,000
Yuba	.....	12,000,000
Poorman	.....	4,000,000
Deer Foot and Alta	.....	6,000,000
Day	.....	12,000,000
Onondago	.....	100,000
Chlorides	.....	5,000,000
Total	.....	\$105,000,000

In round figures, however, it is fair to estimate that the mines of Pochie and of Jack Rabbit have produced \$125,000,000. And yet, with the millions already contributed by these mines, and the mines of Jack Rabbit to the circulating medium of the world, it is believed that a greater amount can yet be taken out, and it is estimated that the ore values blocked out and lying in these properties, ready for extraction, will exceed \$20,000,000 in value, and that this amount, on account of the improved railroad facilities, can be realized. Indeed, no better opportunity in the mining way was ever offered in this intermountain region the assertion being made by experts familiar with this section that with a road connecting the camp with commercial and smelting circles, with improved and cheapened processes of ore reduction whereby 25 per cent of value can now be saved, together with a reduction of the cost of labor and supplies, machinery, etc., the mines of Pochie and Jack Rabbit can be worked at a much greater profit today with silver at 58 cents than they could be during the early days of this truly remarkable camp, when the white metal brought \$1.25 an ounce.



OLD HICKORY MINE.
Ore Loading Station Adjoining the Royal's Montreal Ground.