

Mines and Mining.

REPORTS ON EMMA

THEY INCLUDE THE WEST OLIVE BRANCH, SOUTH OF THE CITY.

CONDITION OF BOTH CLAIMS

A. E. Spriggs, the Superintendent, Has Accomplished Wonders in the of Intelligent Development.

Lee Mantle, president of the Butte Mining & Development company, which is exploring the interior of the Emma and West Olive Branch claims in this district, has submitted to the stockholders of the corporation a report of the condition of the two properties and also the financial status of the company up to December 31.

A. E. Spriggs, superintendent of the company, has also made a report to Mr. Mantle and the board of directors of the company.

The president's report is as follows: "To the stockholders of the Butte Mining & Development company. "For full details of the work accomplished since operations were begun on the Emma claim last January, as also of the work done on the West Olive Branch, with the results so far attained. I refer you to the two reports of ex-Governor A. E. Spriggs, who, at the earnest request of the board of directors, took charge of the company's operations some time since, and at a time when conditions in the Emma shaft were critical in the extreme, owing to the difficult and dangerous condition of the ground.

"Governor Spriggs is a practical miner of many years experience and study, and I regard it as due to his energy and intelligent direction, supplemented by the advice of G. H. Robinson, the well-known mining engineer and expert, that the shaft has been saved, accidents avoided and the work of development finally advanced to a point where it is comparatively easy and where it can be continued at a reasonable expense.

"The first report of Governor Spriggs is of date November 9, 1901, and the second brings the record up to December 31. A careful perusal of these reports will give a very clear idea of what has been accomplished and the present status of the properties.

Governor Spriggs' report shows that at

this time, the conditions in the West Olive Branch claim are not as promising as they were at the 100-foot level when the company took its lease and bond on that property. There is, however, some very rich ore, the extent of which can only be determined by extracting it, which is now being done from the 200-foot level.

It is also apparent from the report that the conditions in the Emma have improved as depth has been attained. The fact that at the 375-foot cross-cut a large body of quartz and rock in place containing some strata of commercial ore, has been cut through, must be regarded as an encouraging indication, although not sufficiently pronounced, with present developments, to warrant the conclusion that we have a paying mine. The conditions are, however, far more promising now than at the inception of the enterprise.

The enormous cost of sinking the Emma shaft, due to the unfavorable character of the ground, has caused a heavy and unexpected draft upon the treasury of the company, having been more than twice as much as was estimated at the beginning. The worst, however, appears to have been passed and sinking is now progressing without trouble, and I think that from now on to the 800-foot level the cost will not exceed the estimate of \$75.00 per foot.

Financial Condition of the Company. Following is a statement showing the financial condition of the company at this time, the expenditures for the month of December being estimated:

Total cash received.....	\$130,794 64
Total Disbursements, Emma Mine.	
Labor.....	\$ 30,632 07
Water.....	684 55
Light.....	492 21
Ammunition.....	893 05
Mis. supplies.....	2,534 78
Repairs.....	1,108 63
Lumber.....	4,228 34
Coal.....	9,489 76
Assaying.....	165 85
Betterments.....	280 00
Repairs.....	10,426 64
Fire insurance.....	155 40
Freight on hauling.....	171 17
Total.....	\$ 61,282 45
West Olive Branch.	
Labor.....	\$ 9,682 59
Assaying.....	10 00
Mis. supplies.....	552 73
Lumber.....	517 15
Coal.....	2,116 80
Betterments.....	2,085 97
Repairs.....	337 02
Freight on hauling.....	144 25
Ammunition.....	596 91
Rent.....	291 00
Mis. supplies.....	176 64
Total.....	\$ 16,511 06

Office expense, attorney's fees, advertising, stationery, commission, etc.....	\$6,548 61
Cash on hand Jan. 1, 1902.....	16,462 52
Total.....	\$130,794 64

Of the total amount expended on the mines \$12,522.61 has been for machinery, boilers, engines, pumps and buildings. The bulk of this amount may be regarded as an asset.

Money May Be Realized.

"I think it quite probable that some money may be realized from ore taken from the West Olive Branch, but I can not even approximate the amount at this time. It is also reasonable to assume that the commercial silver ore now in sight at the Emma will yield some profit, but, as indicated in the superintendent's report, further exploration is necessary to determine the extent and richness of these veins or strata. Rich samples may be found in almost any of the workings, but picked specimens of ore constitute no reliable or trustworthy basis for estimating the extent or value of ore bodies. Nothing but actual development can justify positive statements. The enterprise is still in a speculative condition and it will, in my opinion, require a depth of at least 800 feet and probably 1000 feet to fully and satisfactorily demonstrate its value as a copper mine.

"For information of the general stockholders I may state in passing that none of what is known as the promoters' stock has been placed upon the market, and will not be until the success of the enterprise is assured. Not only this, but the owners of the promoters' stock have entered into an agreement with the company to advance, if necessary, such sums as may be needed to carry the development of the Emma to the point provided in the bond and lease, the conditions being that unless such sums shall be advanced the stock shall be forfeited. While this agreement does not absolutely guarantee funds to the company's treasury, it does provide a means by which the promoters' stock may be made available for raising money to carry on development if it shall become necessary."

Mr. Spriggs' First Report.

The following paragraphs are from Superintendent Spriggs' first report, dated November 9, 1901:

"To Hon. Lee Mantle, President, and Board of Directors of the Butte Mining & Development Company, Butte, Mont.: "Pursuant to your urgent request, though much against my will, I took charge of your operations August 24, and have remained actively in charge ever since that time.

"I found that work in the shaft had been suspended at 375 feet. The work of cutting a pump station on the north side of the shaft at a depth of 340 feet was just completed and pumps partly installed.

"I found this to be a costly error, as the ground would not stand; and after exhaustive efforts to keep the station open, was compelled to cut another station on the south side of the shaft 23 feet lower and remove the pumps to that point, for by this time the station had gone down sufficiently to jeopardize steam connections and endanger life below. The old station was then firmly bulkheaded to prevent the moving ground from wrecking the shaft.

"But in spite of every precaution the ground on the north side of the shaft for a distance of 80 feet settled almost two feet, carrying the north side timbers down several inches. This movement had been anticipated and the shaft prepared for it by reinforcing the timbers and angle-bracing the lower 100 feet. If this precaution had not been taken the shaft would have been lost. The work of putting in a new station and protecting the shaft occupied 30 days. Work was then resumed in the bottom and the running ground, consisting of a talc quicksand, held by driving piling. The water resistance in this ground was so strong that spilling, 4x6 inches and 16 feet long, driven into it by compressed air, would be forced out with rocket-like velocity.

"Twelve days were occupied in sinking four feet, though upwards of 500 tons of dirt were removed. Finding it impossible to hold this ground with the water pressure in it from both above and below, and believing this talc quicksand lay next to the granite foot wall and was the same body of ground reached by the old shaft at 200 feet of depth, which, if it maintained its dip, would be reached by the present shaft at about 400 feet, it was deemed the part of wisdom to endeavor to remove as much of the overhead water as possible. With that object in view the bottom of the shaft was securely bulkheaded, and what might be termed an elbow crosscut was run from the station, 14 feet above, to foot wall, made by drifting 10 feet west from station, then turning at right angles and driving 30 feet north to the foot wall, thus passing by the west end of the shaft. This crosscut not only drained the water out from above, but also showed the extent and character of the running ground, which proved to be a water course on the foot wall, filled for 26 feet in thickness with talc and quicksand of about the consistency of molasses.

The Crosscut Bulkheaded.

"In cross-cutting this 26 feet the ground was held by spilling the top, bottom and sides and breast-boarding back. As soon as the solid wall was reached, so that there was something substantial to build from, the cross-cut was bulkheaded with 10x10 fir timbers and a water box, made from 10x10 timber, carried through to conduct the water from the foot wall out to the station, where it is discharged into pump tank.

"This work occupied six days. Work was again resumed in the bottom of shaft and continued for 14 days; during this time 20,000 feet of spilling were driven and a total of 12 feet made, making all told 16 feet of this ground gone through, leaving from 10 to 11 feet yet remaining before the footwall was reached.

"A crosscut has been run from the station to the footwall, a distance of 60 feet west and 26 feet north to the wall. A crosscut has also been run to the south from the west drift, a distance of 75 feet, and a drift east 25 feet. This work has exposed a large body of quartz lying towards the hanging wall, which gives promise of having commercial value.

Plenty of Water.

"We are handling 325 gallons of water per minute at a cost of \$40 per day for fuel. Our pumps are being taxed to their utmost capacity and I hesitate to

drift on the ore body for fear of developing more water than we can handle.

The Olive Branch.

"Work on the Olive Branch claim has progressed very slowly. The first serious difficulty we encountered was a heavy flow of water at 142 feet, necessitating the installing of a station perched at the 100-foot level, which was rented from Louis Kaufman. A No. 7 Knowles' sinking pump was carried below. The increase of water overtaxed our boiler capacity, causing considerable delay and compelling us to procure another boiler, which was also leased from Kaufman. The ground, consisting of granite quartzite, was so hard that hand work, even with inch and a quarter steel, was ineffective and one of the discarded machines drilled at the Emma was rigged for steam and placed at the shaft, with satisfactory results. The shaft is now 305 feet deep, having been sunk by us 105 feet. The owners of the property have accepted the work in full payment for a quarter interest in the claim. It has \$11,500 to equip this property and sink the shaft; \$112 per foot for the first 30 feet and \$85 per foot for the remainder. An additional \$3500 should determine the existence or absence of pay ore.

"The results attained in both the Emma and Olive Branch during the 75 days I have been in charge, from a standpoint of progress, have been very discouraging, and to me, keenly disappointing. I have devoted every energy of my command and contributed many sleepless nights to the interests of the company and have the satisfaction of knowing that all of your current expenses with the exception of fuel, have been reduced nearly half; and in the instance of hardware and miscellaneous supplies over 70 per cent.

Mr. Spriggs' Second Report.

The following are some paragraphs from the superintendent's second report made December 21:

"If present conditions continue to prevail the 500-foot mark in the Emma will be passed during the next four weeks, and 700 by April 30.

"The most successful handling of the body of live talc quicksand 37 feet in thickness and filling a large subterranean water course, which was encountered in this shaft at a depth of 373 feet and continued down to 410 feet, presented one of the most difficult tasks ever undertaken by mining men; and whatever may be the future of your company you have by this success made an enviable record in the Butte mining district, and established a reputation for rugged, stubborn determination under the most trying conditions. The cost of this undertaking has been very heavy. It has occupied 112 days' time to sink 37 feet, retimer, repair and strengthen the shaft, cut a station 14x26 feet, install a pumping plant therein and run 230 feet of drifts, and cross-cuts at an expenditure of nearly \$66,500. The last 30 feet sunk has cost about \$74 per foot. I consider \$75 per foot a fair estimate for sinking the remainder of the shaft.

"Work on the Olive Branch has progressed at a rapid rate since my last report of operations made 52 days ago. At that time the shaft had just reached the 200-foot level. A station was cut at that point. A cross-cut has been driven to the south ledge, a distance of 33 feet, and beyond the intersection of the ledge 23 feet further south. A level has been run each way on the south ledge 63 feet to the east and 60 feet to the west, making a drift on the lead 123 feet long. The lead has a width of something over two feet filled with broken ledge matter interspersed with hard quartz crystals. A small stringer of good ore was encountered in the East drift about 15 feet east of the cross-cut, but it cut out in about 12 feet. We did not consider it of enough importance to make an upraise on, and continued the drift in the expectation of catching the chute of ore, which exists at the 100-foot level above, before rising. In the meantime, having appointed up to date, either the ore body on the level above does not come down to the lower level or its pitches sharply to the east and our drift has not yet reached it. If we do not reach it in a few feet more with the drift, we will raise up and connect with the ore chute and thereby determine its extent and if, as valuable as we have reason to believe, extract and market same.

"The West drift has a body of good healthy looking quartz about 18 inches in width in the face, which is showing better values as we get in on it, and if it improves in the next 30 feet at the same rate as the past 30 feet it will be commercial ore. The cross-cut to the large ledge on the north was driven 41 feet to the intersection of the hanging wall in the lead, of a stringer of low grade quartz about three feet in thickness lay next to this hanging wall, then a heavy intrusion of granite of about 15 feet in width, followed by a stringer of quartz half the width of the first one and it has continued so for 22 feet, alternating stringers of quartz and granite. We have cross-cut from the hanging wall toward the foot wall a distance of 42 feet. So far the quartz in the lead as developed by the cross-cut is low grade with the exception of small bunches of good ore. The lead at this level appears to be very badly broken up and bears very little resemblance to the same lead on the level 100 feet above. It is possible that when we reach the foot wall that we may find a stringer of good ore. If, when the foot wall is reached by the cross-cut, indications have not improved, I should not advise drifting on it. It is so badly shattered and dispersed through the granite formation that I am doubtful of its ever re-asserting itself. So far the results of the development work done in this property are not very encouraging and do not meet the expectations justified by the conditions existing on the level above. I think in from 15 to 20 days we should be shipping ore or turn the property over to leasers who can work on the small ore bodies exposed, at more profit than a company.

"This property has been operated by your company since last July. A complete hoisting and pumping plant has been installed and a double compartment shaft has been sunk from the 100-foot level to the 200-foot level, 145 feet of cross-cutting done and 123 feet of levels run at cost of, exclusive of office expenditures, about \$16,511. The company owns an undivided one-fourth interest in this property, with a purchase option and bond on the other three-fourths.

OLD EMERY DISTRICT.

Great Improvements in Progress There—New Shafts Being Sunk.

Deer Lodge, Jan.—Perhaps there is no small mining camp in this end of the state that has a more promising outlook at present than the properties at Emery.

During the last few months a great deal of improvement about the mines has been going on and at present about 100 men are at work.

At a point about 400 feet down the hill from the old incline shaft of the Emery a new double-compartment shaft is being sunk and is now nearly 100 feet down. It is expected that the vein will be tapped at a depth of about 400 feet.

A new 125-horse power boiler and whelm have been put in and the mine will soon be worked from the new shaft in up-to-date style.

Other properties, including the Black Rock and the Hidden Hand are being worked with good results. The entire camp is booming and good ore is being shipped steadily.

FARMER TOBN BY WOLVES.

Desperate Adventure of Olaf Halesrud Who Lives Near La Crosse.

(By Associated Press.) La Crosse, Wis., Jan. 25.—After a desperate struggle with a pack of wolves, Olaf Halesrud, a well known farmer, who lives about ten miles north of here, lies in a critical condition, with the flesh literally torn from his body in many places. Physicians say he cannot live.

He was awakened last night by a disturbance among the animals in his barnyard.

On going out of the house he was surrounded by the wolves. He attempted to regain the house, but before he had gone 20 feet the beasts were snapping and snarling at his heels.

He tried to defend himself with a club, but several times he was forced to the ground with the wolves upon him.

Each time, however, he managed to fight them off until he regained his feet.

Fighting his way inch by inch, he finally succeeded in reaching the door of his dwelling, staggered in, and drew the bolt.

Wolves have recently been so numerous and their work so destructive in this vicinity that an organized effort is being made to hunt them down.

Buffalo Contractors in Trouble.

(By Associated Press.) Buffalo, N. Y., Jan. 25.—Hingston & Woods, contractors, have announced their inability to meet their liabilities at maturity, and have called a meeting of their creditors on January 20 to pass upon the question of an adjustment of their obligations. No figures are given.

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REEFERS, made of fine chinchilla, beaver and Irish frieze, plaid linings, silk velvet collars and cuffs, double breasted, 3 to 15 years—
\$7.50 Reefers reduced to - - - \$5.00
\$6.00 Reefers reduced to - - - \$4.00
\$9.00 Reefers reduced to - - - \$6.00

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SAVING money and getting the right thing are two good reasons why prudent people should respond to our great annual clearing sale of winter goods. Women's fine suits that were \$50.00 are now \$25.00. Suits, jackets and raglans that were \$25.00 are now \$10.00 and \$12.50.

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