Seventh Annual Report

OF THE

Gwin Mine Development Company

San Francisco, Cal.

April 23rd, 1901

To the Stockholders of

The Gwin Mine Development Company

I take pleasure in submitting for your consideration,

The Seventh Annual Report

of the operations at the Gwin Mine, ending April 1, 1901, together with the estimates of ore reserves by the Company's Surveyor, W. E. Downs, C. E.

UNDERGROUND WORK

1600-Foot Level, Main Fissure

The North Drift on the Main Fissure was extended 168 feet, a total of 377 feet. North of main cross-cut no ore body was encountered, though for about 300 feet the fissure was fairly well defined and filled with gouge, bunches and stringers of quartz, more or less gold bearing, excepting, of course, the ore body in the drift, 56 feet long, mentioned in the Sixth Annual Report. About 1200 tons of material, called waste, excavated in extending this drift, were subsequently milled. North of the point above alluded to, the line of fissure was very indistinct and most difficult to follow. At 229 feet north, a cross-cut was driven east 37 feet, encountering another fissure containing gouge and stringers of quartz of no practical value. At 312 feet north, a cross-cut was driven west about 45 feet, ending in hard black slate. Near the end of the drift, a cross-cut was driven northeast 83 feet without encountering anything of practical value, though disclosing gouge, stringers and bunches of barren quartz. In consideration of the fact that at a point on the 1400-foot level about 450 feet north of the cross-cut a winze was sunk in ore to a depth of 50 feet, it would seem, from explorations in the 1600-foot level north, that the ore body, somewhere below the bottom of the winze mentioned, and the 1600-foot level, had changed its pitch from north to south, the most likely supposition; or less likely, had been displaced, and its trend altered easterly or westerly of the northerly course; westerly would be more in conformity with the course of the lead on the 1400-foot level, and the generally northwesterly trend of the Mother Lode for long distances. This question can be settled more economically in the course of stoping upward from the South Drift of the 1600-foot level, and subsequent exploration in the North Drift at a more convenient time when the stopes of the next lower level will require material for filling.

The South Drift on the Main Fissure has been extended 668 feet, a total of 780 feet. Its width in the face is twelve feet of solid ore. The fissure in the southerly direction appears better defined than elsewhere in the mine, and the average grade of ore yielded has been better, thus far over $5.00 per ton; a far greater average width of ore has been maintained than on any other level, and the ore has carried a better grade of sulphurets.

A Raise, 308 feet south of the main cross-cut, connects with the 1400-foot level, the distance between the two levels on the dip of the vein being 214 feet. The raise is 213 feet in height, the upper portion being vertical. Continuous ore is shown of a similar grade with the rest of the 1600-foot level ore. A cross-cut 185 feet south of the main cross-cut was driven east twenty-five feet into the hanging wall for the purpose of testing same.

1400 Foot Level

Considerable repairing and much renewing of the South Drift has been done, and it has been extended twenty-eight feet to a point 149 feet south of the old South Shaft. The fissure contains about five feet in width of payable ore, and the work of drifting is still being prosecuted, with very favorable indications. This is the extreme southerly limit of development reached by this Company.

A Raise, 555 feet south of the main cross-cut and 107 feet in height, connects with the 1300-foot level.

1300 Foot Level

The South Drift has been extended 224 feet to a point 996 feet south of the North Shaft, or back of the old South Shaft, with payable ore in the face of the drift. Work will be continued upon it.

A Cross-cut, about 787 feet south of the main shaft, was driven 175 feet west toward the "west vein" fissure. It is intended to continue this cross-cut when material is needed for filling the stopes above the 1400-foot level.

A Raise, 86 feet in height, was made 825 feet south of the main cross-cut.

1200 Foot Level

It was driven south 121 feet, making a total of 783 feet south of the Station and discontinued when directly under the old Gwin 1400-foot level from the South Shaft.

A Cross-cut, at about 700 feet south of the Main Shaft, was driven west 271 feet, passing the west vein fissure at about 205 feet from the main drift, but it disclosed nothing of value.

A Raise, about 95 feet south of the center of the Station, was continued from 96 feet above the track floor to connection with the winze from the 1000-foot level, a vertical height of 66 feet, but following the old stopes and caved ground for several hundred feet; the work was very difficult, requiring much skill in its accomplishment, but several thousand tons of good ore were recovered.

1000 Foot Level

About 100 feet above the main level, a drift has been run 178 feet south. This work is still going on, the distance of the face north from the South Shaft being about 100 feet. Connection with the South Shaft will give good air at this point of the mine and afford better facilities for handling timbers.

1600 Foot Level—West Vein

On April 1, 1900, the faces of the north and south drift were 103 feet apart; during this year a distance of 22 feet was driven north, and 55 feet south, and the faces are now 180 feet apart. The vein, though very persistent and of good grade, gradually decreased to a few inches in width at each end. The walls are very hard slate with little gouge. Stoping, north and south of the shaft, demonstrated the vein to be thickest at the shaft, diminishing in thickness as stoped upward until, at 30 feet above the station floor, it appeared to too small to be worked with profit. We are apparently near the top of a rich vein at the 1600-foot level, increasing in width with depth, thus promising an improvement in size on the next level below, and in depth it may become a very valuable part of the Gwin mine. Two cross-cuts on the 1200 foot-level found the fissure of this west vein at about the same distance west of the main fissure as on the 1600-foot level, namely, 205 feet; the ore at the points of intersection with these cross-cuts was in narrow stringers and of no practical value.

Resume of Developments

Drifts run north and south........	1,464 feet
Cross-cuts run east and west.......	636 "
Raises made.....................	472 "
Total................	2,572 feet

In addition to drifts, cross-cuts, raises, etc., enumerated, many stope-raises, cross-cuts for filling stopes, and small stope-drifts were run.

Ore Milled During the Year

Weight is based on 20 cubic feet of broken ore per ton of 2,000 pounds.

From 1,000-foot level...........	5,311 tons
" 1,200 " "	8,140 "
" 1,300 " "	14,700 "
" 1,400 " "	20,674 "
" 1,600 " "	49,250 "
" 1,600 " " waste.......	1,136 "
Total ore milled during the year.....	99,211 tons

Ore mined, hoisted and transported to mill..........99, 367 tons

	Tons
Ore estimated in mill bins April 1, 1900...................	572.6
Waste " " " "	50.4
Total..	623

The 50.4 tons of waste on hand April 1, 1900, is calculated as ore in this report.

Ore estimated on hand in mill bins, April 1, 1901, was....779 tons

With rail transportation, working charges on bullion and sulphurets deducted, the returns from the Selby Lead and Smelting Company were as follows:

		Per Ton
99,211 tons ore yielded in free gold.........	$314,479.80 or	$3.1698
1,365.5 tons sulphurets yielded............	104,944.68 or	1.0577
Total.........................	$419,424.48 or	$4.2275

	Per Ton of Ore
Percentage of sulphurets in the ore....................	1.376%
Our average assay of tailings............................	$ 0.308
" " " sulphurets, *by the month*..........	92.53
Selby's " " " by Lots...............	92.568
Average of 99.211 tons of ore in free gold and sulphurets, per Selby's Returns yielded.........................	$ 4.2275
Add for railroad freight and working charges...........	0.1560
Actual yield..................................	$ 4.3835

	Per Ton
During last eight months 65,200 tons yielded, free gold....	$3.583
" " " " sulphurets....	1.140
As before, adding for R. R. freight and treatment.........	0.156
Actual yield..................................	$4.879
Add loss of tailing..........................	0.308
Actual value of ore............................	$5.187

Tons worked by this Company to April 1, 1899..........	100,094
" " " from " to Apr. 1, '00	71,650
" " " " " 1900 " 1,'01	99,211
Total..	270,955

Average value of Amalgam per Troy oz. for 12 mos.....$	7.16
" " " " lb. "	85 92
" free gold val. per Troy oz. quicksilver fed for 12 months..	13.5306
Average free gold val. per Troy lb. quicksilver fed for 12 months..	162.367

Loss of quicksilver from all causes, milling, retorting, etc., for 12 months was 958 lbs. avoirdupois in working 99,211 tons of ore or 0.154 oz. avoirdupois per ton of ore. A test of 43,450 tons of ore worked showed that of this amount lost 0.0035 oz. averdupois per ton of ore were due to the retorting of the Amalgam.

One carload Lot was estimated by mine assay; also 69 sacks on the last Lot, returns from which have not yet been received.

There were 73 Lots of sulphurets and 69 sacks in 74th Lot sent to Selby's.

IMPROVEMENTS

1. A Commodious Galvanized Iron Changing House, provided with furnaces, over 200 individual booths, and six hot and cold water shower baths.

2. A Galvanized Iron Carpenter Shop.

3. A Galvanized Iron Retort and Melting House, with cement floor and equipped with all modern appliances, containing two retort furnaces, two melting furnaces, with flues leading to a high brick stack, first class in every respect.

4. A Furnace for Burning Chips, old sulphuret sacks and refuse from the mill, whereby any gold contained may be recovered from the ashes.

5. One 2d-hand 3-drill Compressor.

6. An Automatic Tailings Sampler and sluice connections, enclosed in a substantial galvanized house.

7. The Gallows Frame Raised fourteen inches, and an entire new front constructed, with ore-chutes, grizzlies and ore-bin gates.

8. Two Wrought Iron Timber Cages to follow the skips.

9. A New and Larger Blower put in place; changes and pipe connections made.

10. Two Hydraulic Lifts for loading timbers on skips and cages.

11. A Compressed Air Lift for unloading timbers at the 1600-foot station.

12. A Single Line of Guides placed in each of the two working compartments of the shaft from top to bottom, with new 2½ ton skips, the old double line of guides having been removed.

13. A Compressed Air Trip-Hammer, a large punch and a power drill press have been added to the blacksmith shop equipment.

14. Changes have been made in the compressor pipe-line near the plant and the receiver moved into the tail-race, for cooling the air, remedying in a great measure the expansion and contraction in the pipe-line near the Compressor.

Real Estate Purchased, Etc.

$5,000 advanced to the Mokelumne and Campo Seco Canal Company for first right to use of water for five years and privilege of renewing same for three years more, to be repaid in water at the rate of $1,000 per annum. $1,000 has been repaid in water, leaving to our

Credit	$ 4,000.00
Gallagher Ranch Purchase	5,000.00
Balance of Queen Consolidated Purchase	1,356.75
Goodell Purchase	1,200.00
Leonid Assessment Work with view to Patent	500.00
Total	$12,056.75

Besides numerous small expenditures in the way of transfers, surveys and legal expenses in connection with patent applications for several locations.

Cost of Mining and Milling

Including all Costs, Depreciation of Plant, Etc., One Per Cent. Per Month on Balances of Equipment and Construction Written Off

	Per Ton
Mining and ore transportation to mill, 11 months	$2.2855
Milling and shipping sulphurets to Valley Springs	.4406
Total cost for 11 months	$2.7261

The 12th month of the year, or March, is estimated as follows:—

	Per Ton
Mining and transportation to mill	$2.23
Milling and shipping sulphurets to Valley Springs	.42
Total	$2.65

PRODUCTION

During this Company's Ownership

To April 1, 1900	171,748 tons ore yielded	$ 702,003.81
From Apr. 1, '00 to Apr. 1, '01	99,211 " "	419,424.48
To Apr. 1, 1901	270,959 tons ore yielded	$1,121,428.29

These figures are from Selby's *Net* Returns, 369 sacks of sulphurets only being estimated as per mine assays.

During the 365 days of the last year, 99,211 tons of ore were crushed by the eighty stamps now installed, equivalent to 271.8 tons per day or 3.397 tons per stamp for every day in the year, making no allowance for stoppages from any cause whatever.

The stoppages were:—

1st. The Normal: About one day each month for cleaning up the mill and replacing shoes and dies.

2d. The Accidental: Due to shortage of water, occasioned by an unusually dry season and lack of reservoir capacity in the Canal Company's water system, which has since been greatly improved; and due to incidental breakage of parts, stems, machinery, etc. The frequent difficulty of raising ore to full capacity of the hoist, on account of insufficiency of compressed air occasioning the use of water skips during the wettest months, at the expense of much ore hoisting and consequent time lost. It is contemplated in the near future to remedy these causes affecting the efficiency of the hoist, and work is now in progress to accomplish this end. It is estimated that for these reasons chiefly not more than an average of seventy stamps have been normally working to full capacity during the year, and that this duty has been 3.88 tons per stamp per day, including all stoppages, and four tons per day while running. It is estimated that when the next lower level is opened, the twenty additional stamps, for which preparation has been made in the way of building, ore-bins, purchase of copper-plates, etc., can be installed and kept running advantageously.

The Company's surveyor takes all the underground measurements monthly and furnishes stope maps which are kept in the offices of the Company both at the mine and at San Francisco, and which are accessible to the stockholders. He also takes measurements and estimates of ore reserves once each year for the Annual Report.

The mill and machinery are in usual good working order, and the mine is in better condition than during any previous time since it was re-opened.

Too much praise can not be given to Mr. McClure for his able and untiring efforts and ceaseless attention. Those in charge of the different departments have given great satisfaction.

Though nearly 100,000 tons of ore were extracted from the mine during the past fiscal year, the shaft being no deeper, the estimates of ore reserves made by the Company's surveyor, show 330,000 tons of ore above the 1600-foot, or lowest, level, compared with 311,500 tons of a year ago, due chiefly to the unusually large development of ore on the 1600-foot level, the grade of which, thus far worked, has averaged not less than $5.00 per ton.

The 1400-foot level has been continued south of the point where work ceased a year ago, and shows ore of a milling grade to a width of five (5) feet, and is still getting wider, giving fair promise of future good developments in the south end of the mine, which is wholly unprospected at this depth and embraces by far the greater length of the Gwin Mine claim.

The recommendations made in the last Annual Report, in regard to catching up the water in the south shaft, at or near the old 600-foot level, and pumping to the surface, and procuring a diamond drill for exploration, are still approved but have not thus far been carried into effect on account of insufficiency of air for other power, and more pressing needs. Work is being undertaken with a view to economically increase this source of power.

The Company is to be congratulated on the appearances and indications of the 1000-foot and 1600-foot levels, and the southern workings of the 1400-foot level, and particularly the mine's great promise for valuable deposits of ore at greater depths. The Company is entirely out of debt with the exception of the current monthly bills and those for supplies on approval.

Respectfully submitted,

F. F. THOMAS, *Superintendent.*

San Francisco, Cal., April 23, 1901.

MR. W. F. THOMAS,

Sup't Gwin Mine Development Co.

DEAR SIR:—My estimate for the tonnage of available ore in the Gwin Mine is larger than it was last year, owing to the extraordinary development made on the 1600-foot level, and is as follows:

	Tons
Above the 1000-foot level, south stopes	10,000
Near the 1000-foot level, Winze (Klondyke)	100
In 1300-foot level, stopes north of south shaft (not including pillar)	3,830
In 1400-foot level stopes, between the two shafts (South Africa)	3,550
In 1300-foot level and 1400-foot level, stopes south of south shaft, and extending as far south as the face of the 1400-foot level	15,000
In 1600-foot level and stopes below present 1400-foot level	297,520
Total	330,000

The average horizontal width of vein removed from the 1600-foot level, south drift and stopes during the past year is 21.61 feet. The average incline (actual) width is 20.29 feet.

The average horizontal width of vein removed from the mine by the Gwin Mine Development Co. to April 1, 1901, is 11.19 feet.

Yours truly,

W. E. DOWNS, C. E.

Sutter Creek, Cal., April 8, 1901.

To the Stockholders of The Gwin Mine Development Company:

Herewith please find a resumé of the financial transactions of this Company for the fiscal year ending April 1, 1901, prepared by Mr. B. Johnston, your bookkeeper at the mine. The system of accounts and dealing out supplies upon requisitions from the foremen, inaugurated during the previous year, has proved to be very satisfactory and has resulted in great saving of supplies. Too much praise can not be accorded Mr. Johnston for his close attention, industry, and the very capable manner in which he has conducted this branch of the Company's business.

On May 15, 1900, the Board of Directors instructed the President and Secretary to execute the contract with the Mokelumne and

Campo Seco Canal and Mining Company, negotiated by the secretaries of the two Companies, for furnishing our Company with water for power, etc., for the term of five (5) years, with the privilege of renewing same for three (3) years more, at the end of which period the life of the Canal Company's charter expires. Our Company has secured the *first right to the use of the water*, excepting, of course, the very small amount needed for the inhabitants of the village of Mokelumne Hill. In order to obtain this concession, our Company had to advance to the Canal Company five thousand ($5,000) dollars, to be repaid in water at the rate of one thousand ($1,000) dollars yearly. The importance of this concession, in years of drought especially, can not be over-estimated.

On June 19, 1900, the Board of Directors accepted the lowest responsible bid, that of the Booth-Kelly Lumber Company, for supplying this Company with mining timbers and other kinds of lumber at prices considerably below that previously paid. The management reports that the material supplied under the contract is very satisfactory and the best that has ever been delivered at the mine. This contract, beginning August 1, 1900, was renewed on March 21, 1901, for an additional year, but at a still lower price.

Upon the recommendation of the "Committee on Acquisition of lands contiguous to the mine," the Board of Directors, on July 17, 1900, instructed the President and Secretary to purchase the Gallagher Ranch of One Hundred and Ninety-four and Forty-three One-hundredths (194 43) acres, adjoining our mining property on the east, under which our vein dips, and to re-convey to Mrs. Gallagher the *surface rights* thereof, but reserving to our Company all the mineral, and the right to use any and all of said surface as may be reasonably required or deemed necessary by our Company for carrying on the business of mining in said and adjoining land, excavating shafts, tunnels, etc., maintaining dumps, erecting and operating machinery, mills and reduction works, and the erection of such other buildings and appliances as our Company may require, together with all the rights of way over and across said land for wagon roads. car tracks, tramways, ditches, pipe-lines and wire pole lines as may be required. The Committee has been endeavoring for nearly two (2) years to acquire this

ground, as it is very necessary to the future development of our property. A glance at the map will convince the most skeptical, as our mining patent is only a narrow strip in the gulch.

On March 19, 1901, the Board instructed the President and Secretary to purchase from Mr. Goodell the Boston Hill Placer Mining Claim of Fifty-eight (58) acres. This acquisition straightens the eastern boundary line of our tract of land and avoids litigation in procuring patents to our Queen and Stemwinder quartz locations.

In March last, the Board appointed a Committee to confer with the Southern Pacific Railroad officials in regard to their extending the railroad from Valley Springs to the mine and possibly beyond. It is almost absolutely necessary that the mine be connected with the outside world by railway, for the amount of freight to and from the mine during the year averaged over twenty (20) tons per day and is constantly increasing. The immense quantity of timber, over 200 M., placed in the mine monthly, the very limited yard room, and the impassable condition of the roads in winter, render a railroad a necessity. The Committee has been unable to report in consequence of the continued absence of Mr. Hays, the President of the Railway Company.

Beginning with the month of June, 1900, and ending with March, 1901, besides the sums expended as per your Superintendent's and bookkeeper's reports, and a snug sum remaining in bank, the mine has earned, and dividends Nos. 11 to 20, inclusive, have been declared, amounting to One Hundred and Twenty Thousand ($120,000) Dollars, or twelve per cent. (12%) on the par value of the Company's Capital Stock.

Respectfully submitted,

J. J. CRAWFORD, *Secretary*.

San Francisco, Cal., April 23, 1901.

J. J. CRAWFORD, M. E.,

Secretary Gwin Mine Development Company.

The following is a summary of the financial transactions of the Company for the fiscal year ending March 31st, 1901.

RECEIPTS

Cash on hand April 1, 1900	$ 7,780 84	
Selby's net returns of sulphurets	104,950 93	
" " " bullion	314,479 80	
Rents, electric lights, etc., etc.	1,980 67	
M. & C. S. C. & M. Co. repaid in water, account of advances	1,000 00	$430,192 24

DISBURSEMENTS

Mining, Milling and Development Work	$269,661 21	
Dividends, Nos. 11 to 20 inclusive	120,000 00	
Advanced to Mokelumne & Campo Seco Canal and Mining Company	5,000 00	
Real Estate	8,205 15	
Equipment and Construction	11,426 99	
General Supplies on hand in excess of April 1st, 1900	8,973 79	
Cash balance on hand, April 1st, 1901	6,925 10	$430,192 24

Gross profits for the year were $151,749.19, as follows:

Receipts from Bullion, Sulphurets and Rents, etc.	$421,411 40
Less Cost of Mining, Milling and Development	269,661 21

SUPPLIES ON HAND

Wood (for boilers)	$ 115 50	
Lumber	15,405 55	
Wedges	45 36	
Powder	313 89	
Fuse	215 03	
Caps	25 26	
Candles	370 72	
Steel Rails	99 12	
Drill Steel	1,226 17	
Iron and Steel	629 70	
Hardware	1,206 86	
Blacksmith Coal	22 50	
Steam Coal	379 53	
Charcoal	66 68	
Oil and Lubricants	31 90	
Shoes and Dies	577 10	
Quicksilver	300 44	
Mill Supplies	331 14	
Brick	5 41	
Belts and Driving Ropes	190 00	
Pump Extras	49 84	
Power Drill Extras	210 00	$21,817 70

Respectfully submitted,

B. JOHNSTON, *Bookkeeper.*

Gwin Mine, April 18, 1901.