Huntington-Rail Roads

309

ANNUAL REPORT

OF THE

SUTRO TUNNEL

COMPANY.

1881.

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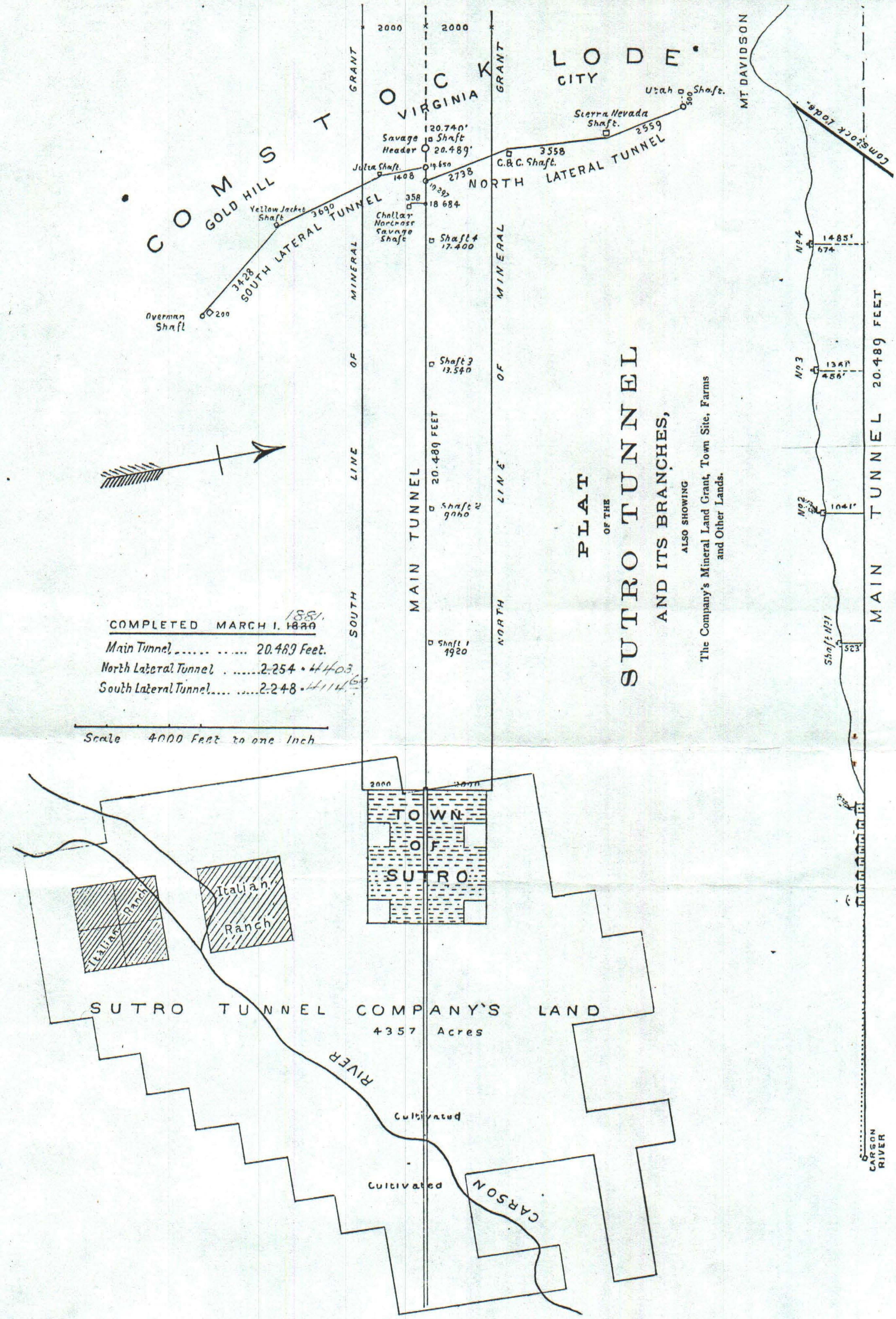
COMPANY.

San Francisco:
WOMEN'S CO-OPERATIVE PRINTING OFFICE, 420, 424 & 430 MONTGOMERY STREET.
1881.


PLAT OF THE SUTRO TUNNEL AND ITS BRANCHES,
ALSO SHOWING
The Company's Mineral Land Grant, Town Site, Farms and Other Lands.
COMSTOCK LODE
GOLD HILL
VIRGINIA CITY
Utah Shaft.
500
Sierra Nevada Shaft.
2559
3558
C.&C. Shaft.
NORTH LATERAL TUNNEL
2738
120.740'
Savage Shaft
Header 20.489'
19.650
19.297
Julia Shaft.
1408
358
18 684
Chollar Norcross Savage Shaft
Yellow Jacket Shaft
3690
SOUTH LATERAL TUNNEL
3428
Overman Shaft
200
2000
2000
SOUTH LINE OF MINERAL GRANT
NORTH LINE OF MINERAL GRANT
Shaft 4 17.400
Shaft 3 13.540
Shaft 2 9060
Shaft 1 1920
MAIN TUNNEL 20.489 FEET
COMPLETED MARCH 1. 1880 1881.
Main Tunnel .... 20.489 Feet.
North Lateral Tunnel . ...2.254 • 4403.
South Lateral Tunnel.... .....2.248 • 4114.60
Scale 4000 Feet to one Inch
2000
2000
TOWN OF SUTRO
Italian Ranch
Italian Ranch
SUTRO TUNNEL COMPANY'S LAND
4357 Acres
CARSON RIVER
Cultivated
Cultivated
MT DAVIDSON
Comstock Lode.
No 4
1485'
674
No 3
1341'
456'
No 2
1041'
Shaft No 1
523'
MAIN TUNNEL 20.489 FEET
CARSON RIVER

OFFICERS.

PRESIDENT,

CHARLES W. BRUSH.

VICE-PRESIDENT,

WILLIAM IRVINE.

TREASURER,

LAZARD FRÈRES.

SECRETARY,

PELHAM W. AMES.

GENERAL SUPERINTENDENT,

C. C. THOMAS.

TRUSTEES,

CHARLES W. BRUSH,
WILLIAM IRVINE,
F. F. LOW,
DAVID CAHN,
HUGH MARSHALL,
WILLIAM JOHNS,
JOSEPH ARON.

President's Report.

SAN FRANCISCO, March 1, 1881.

To the Stockholders
of the Sutro Tunnel Company:

At the date of the last annual report, March 1st, 1880, the North Lateral Tunnel had been constructed 2204 feet northerly from the Main Tunnel, and the South Lateral Tunnel had been constructed 846 feet southerly from its initial point near the shaft of the Julia Company.

During the past year the North Lateral Tunnel has been advanced 2149 feet, making its total length from the Main Tunnel 4403 feet. By an understanding with the mining companies interested, work on this Tunnel was temporarily suspended on the 4th day of October last, and has not yet been resumed. All of the mines, however, north of the Main Tunnel, belonging to companies having agreements with this company, are now drained through this branch tunnel and the Main Tunnel.

The South Lateral Tunnel has been extended during the past year 1903 feet, making its total length from the Main Tunnel $4114\frac{69}{100}$ feet.

The expenses of the work during the past year have been defrayed from advances and royalties received from several of the mining companies under agreements of March 29th, 1879, and from sales and rents of land and other property, and from amounts borrowed from time to

time as needed, under the mortgage of January 4th, 1877. Efforts are now being made, and with fair prospects of success, to obtain the necessary funds to place the whole work in good and efficient condition, and also to develop and utilize the mineral properties of the company.

For statements of the amounts received and disbursed during the year, and for details of work done, I respectfully refer you to the accompanying reports of the Secretary and of the Superintendent.

Respectfully submitted,

C. W. BRUSH,
President.

Superintendent's Report

SUTRO, LYON CO., NEVADA, March 1st, 1881.

To the President
of the Sutro Tunnel Company,
San Francisco, Cal.

SIR:

I herewith respectfully submit my annual report for the year ending March 1st, 1881, giving a general review of the operations connected with the Sutro Tunnel.

MAIN TUNNEL.

The track in the Main Tunnel has been relaid on new sills, put in good repair on a substantial foundation, and placed on a regular grade from a point 3500 feet from the Tunnel entrance to the 16,550-foot point.

Between these points there have also been constructed five switches, from 300 to 600 feet in length, for convenience in the transportation of rock. There still remain about 3100 feet of track to be placed on a regular grade and relaid in a substantial manner. The work of grading will be comparatively light, and most of the sills will require to be extended only half-way across the Tunnel.

From the mouth of the Tunnel to the 16,550-foot point, considerable general repairs have been made in retimbering, relagging and raising the roof. This was found necessary on account of some of the timbers and laggings

being decayed, and the heavy pressure from the roof bearing down the timbers until the passage of the cars was obstructed.

Previous to March 1st, 1880, the sub-drain had been completed to a point 16,550 feet from the Tunnel entrance and supplied with a single line of boxes. Another line of boxes was laid to a point 11,000 feet from the mouth of the Tunnel, but not covered over, as the single line of boxes was of sufficient capacity to carry all the hot water.

The drain boxes were extended from the 16,550-foot point to the Savage connection, but were laid on the floor of the Tunnel, as the sub-drain was excavated only to the 16,550-foot point.

In July, 1880, work was resumed excavating the sub-drain, and since that time it has been completed to the 17,465-foot point, and the boxes lowered. The Tunnel, to the west of this point, required thorough retimbering before the excavation of the sub-drain could be continued. This work has been completed to the 17,990-foot point, excepting the south posts of the timbers, and these cannot be placed in position until the sub-drain is excavated. On December 21st, 1880, this work was discontinued, and since that time little work has been done.

For a distance of 800 feet west of this point the timbers are more or less decayed and require renewing. I would respectfully recommend that this work be done as soon as possible.

The draught of air in the Main Tunnel has been improved by opening the connection at shaft No. 1, and closing up the connection at shaft No. 2. At present there is a fine circulation of air and work can be done to advantage.

The Main Tunnel is now in excellent order up to the 16,550-foot point.

NORTH LATERAL.

The North Lateral was completed on March 1st, 1880, to a point 2254 feet, measured in a straight line,

from the north line of the Main Tunnel. From that date to October 4th, 1880, at which time work was discontinued in this drift, the header was advanced to a point 335 feet north of the south line of the Mexican mining claim, making a total length of 4403 feet. Most of the ground was favorable, and good progress was made.

On April 18th, 1880, the upraise from the 1700-foot level of the Gould & Curry mine connected with the Osbiston shaft, and a flow of cold water, equal to about 30 miners' inches, entered the North Lateral, and has been allowed to run through the drift in an open ditch. This water will be taken up and confined to our drain boxes as soon as the Gould & Curry commence pumping.

On April 28th, 1880, connection was made with the main west drift from the Consolidated Virginia and California joint shaft on the 1750-foot level, at a point 2808 feet from the Main Tunnel. From this connection the course of the drift was changed to N. 14° 19′ 42″ E., running in a straight line to a point 100 feet east of the Sierra Nevada shaft.

On the 25th of August, 1880, at a distance of 4059 feet from the Main Tunnel, connection was made with a drift run east from the Ophir incline.

The hot water pumped from the north end mines is received and carried off by drain boxes placed on staging above the level of the drift, and on a regular grade of two inches to the 100 feet.

A small sub-drain for the seepage and the water used in drilling was excavated for an aggregate length of 3000 feet. Since the completion of the drain boxes, which work was done during the past year, only occasional repairs have been necessary in the North Lateral, as the ground run through was very favorable, and in many places required no timbering. This drift is in excellent order and can be kept in good repair at little expense.

SOUTH LATERAL.

On March 1st, 1880, the face of this drift had reached a distance of 846 feet from the turning point, 80 feet north of the Julia shaft.

Work remained suspended until April 1st, 1880, when a full force of men commenced repairing.

A large portion of the ground had caved in previous to that time, and many of the timbers were crushed and had to be replaced by new ones, 14x16. Therefore work could not be resumed in the face until May 6th, 1880.

On June 25th, 1880, work in the face was suspended on account of insufficient ventilation. The work was not resumed until July 13th. Again the same difficulty presented itself, and I was compelled to suspend operations until I could introduce a better system of ventilation. This was accomplished by setting up a No. 5 Baker Blower and running therefrom a 15-inch air pipe to the south drift. This, together with the No. 4 Root Blower formerly used, supplied the drift with considerable air.

On September 4th work was resumed, and since that date there has been sufficient good air in the face, but along the line the heat has been very oppressive, and has interfered materially in the work of easing timbers and keeping the heavy ground in repair.

The difficulty in ventilating this long drift has been that we have had the use of only one connection, and were deprived of the benefit derived from this one by its change to an upcast.

S. Lateral

During the month of January, 1881, 150 feet of ground were passed through of the heaviest and most dangerous character ever encountered in the history of the Tunnel. It imperatively demanded a thorough system of retimbering to keep the drift open and to make it safe for the miners to work in the face. Work in the header was therefore discontinued until this ground was made secure, and was not resumed until February 14th, 188..

During the past year the ground encountered in this drift, with the exception of 500 or 600 feet, has been of a swelling nature, and has required considerable extra work in easing timbers, etc. There is still a considerable portion of it that will require to be eased again. After that I do not apprehend much trouble in keeping it in repair, as our experience has been that after ground of this character has been eased two or three times it ceases to swell.

When we were running in good ground excellent headway was made, as much as 148 feet being run in ten days.

On account of the character of the ground in this drift we have not been able to make as good progress generally as was made in the north lateral.

In addition to the work enumerated, we have also excavated a small sub-drain, for the seepage and the water used in drilling, of an aggregate length of 2,715 feet.

The south header has been advanced during the year ending March 1st, 1881, 1,903 feet. At this date the header is 409 feet south of the north line of the Consolidated Imperial ground, and 891 feet north of the Yellow Jacket new shaft.

Total length of South Lateral, 4,114.69 feet.

On March 1st, 1881, the Yellow Jacket drift, I am informed, had advanced a total distance of 603 feet north from their new shaft towards the South Lateral.

This would make the distance between our drifts 288 feet.

TRANSPORTATION.

Mules are still used in the transportation of rock, but the distance is becoming so great, and the heat so oppressive, that in several instances they have become overtasked and overheated. The carmen formerly worked the mules twelve hours, making two trips to header switch and return, but as this overworked the mules, I was obliged to put on another shift of carmen and mules and divide the twenty-four hours into three shifts of one trip each.

In my judgment, transportation by mechanical power would be more economical and much better. We cannot, however, run locomotives west of the 16,550-foot point, until the Tunnel is repaired and the track relaid in places.

COMPRESSED AIR.

The compressed air for the Tunnel was supplied from the compressor at Shaft No. 2, until November 22, 1880. At that date a contract was made with the Gould and Curry Co., and the compressor at Shaft No. 2 was closed down. Since that time we have received our compressed air from the Bonner Shaft.

The machinery at Shaft No. 2 has undergone thorough repairs. After the cylinders are bored out and new pistons put in, the compresser will be ready to furnish the Tunnel with compressed air, and if required could be started up on short notice. But as long as we can have the use of the Gould and Curry compressor, at present rates, I think it would be to our advantage to continue the agreement.

DRAINAGE.

The drain boxes in the Main Tunnel have an inside measurement of 23 inches in height, and 17¼ inches in width. They are placed on a grade of $2\frac{9}{10}$ inches per 100 feet, from the Tunnel entrance to the 17,000-foot point. From thence the grade is 2 inches to the 100 feet. The full capacity of the single line of boxes is equal to 287 miners' inches, or 4,885,776 gallons per 24 hours. This allows two inches for a sudden increase of water, as often occurs when different mines bail and pump simultaneously.

The average amount of water received during the year is equal to about 3,500,000 gallons per 24 hours, or 208 miners' inches; but it has run as high as 232 inches, or 3,942,720 gallons per 24 hours.

Probably within eighteen days we will connect with the Yellow Jacket shaft, and must expect a large increase of water from the Gold Hill mines. The Combination Co. will soon start up their hydraulic pump and their quantity of water will be increased. The Gould and Curry and Best and Belcher Cos., are also making preparations to pump more water into the Tunnel.

Our present single line of boxes is not of sufficient capacity to receive and carry off the water which will be pumped into the Tunnel during the next few months. I would, therefore, respectfully recommend that we complete our sub-drain, extend the double line of boxes to the North Lateral junction, lower the present single line of boxes, and put in drain boxes to the Jacket shaft as soon as possible. We should be prepared to receive from 400 to 500 inches of water from the Comstock during the next twelve months.

The excavation of 1558 feet more of the sub-drain will extend it to the North Lateral junction. From that point to the South Lateral junction the sub-drain is already excavated, but will require to be cleaned out before the sills can be laid. After the double line of boxes is completed to the North Lateral, our boxes will be of ample capacity to receive all the water which is likely to come from the Comstock mines.

The drain boxes in the North Lateral are in excellent condition and of sufficient capacity to carry fifty inches of water more than they are now receiving. Should there be any increase of water from the north end mines the boxes could be enlarged, at little expense, to carry nearly as much water as the single line of boxes in the Main Tunnel.

The following is a summary of the principal underground work done during the year ending March 1, 1881:

MAIN TUNNEL.

Placing track on a regular grade and putting in new sills for a distance of	13,050	feet.
Laying five switches.		
Excavating ditch and lowering single line of boxes.....	915	"
Retimbering the heavy ground west of the 16,550-foot point.....	525	"
Considerable general repairing along the entire line.		

NORTH LATERAL.

Header advanced	2,149	feet.
Drain boxes put in	4,059	"
Small sub-drain excavaetd	3,000	"
Blowers erected.		

SOUTH LATERAL.

Header advanced	1,903	feet.
Drift repaired, partially retimbered and timbers eased for an aggregate distance of	1,500	"
Partition for ventilation erected.	520	"
Caved ground removed and drift re-run before work in the face could be resumed	846	"
Small sub-drain excavated,	2,715	"

IMPROVEMENTS.

I have to report the following improvements made on the property of the Company during the past year:

A small dwelling-house was removed from the town of Sutro and placed on the Company's ground, at a convenient point to the Tunnel, for the use of the Foreman.

The office of the Civil Engineer has been enlarged and improved.

A portion of the store-house has been fitted up for the general office of the Tunnel, which has been removed from the Superintendent's house. We find this much more convenient.

The miners' changing room, carpenter shop, and machine shop have been slightly improved.

A small brick building, about 10x12 feet, has been built at the Tunnel entrance for an oil room. The oil for torches, etc., was formerly kept in the changing room, and danger from fire was imminent.

A small shed has also been made to shelter the air locomotives.

The two water tanks on the hill have been put in good repair and every preparation made to extinguish fire.

Quite a number of the Company's houses in Sutro were unoccupied. About eight of them have been repaired and made tenantable, and rented at fair rates.

Some slight improvements have also been made on other buildings of the Company.

CULTIVATION.

The area of land under cultivation is about 189 acres, of which 113 acres are on the Gee ranch, 54 acres on the Moore ranch, and 22 acres in the town squares which form the northeast and southwest corners of Sutro township.

That portion of the Gee ranch which was sown in grain in 1879 was, in the fall of that year, seeded to alfalfa. It is estimated that there are 65 acres planted in alfalfa.

The product of the Company's land is estimated as follows:

Alfalfa hay sold	94	tons.
Alfalfa hay consumed—Tunnel account	303	"
Alfalfa hay on hand	208	"
Total	605	"
Carrots consumed	60	"
Barley consumed	73	"
Barley reserved for seed	7	"

In consequence of the mildness of the winter we have not been able to make any ice on the ranch this season.

The Company's stable and sheds on the Gee ranch, in which were stored sundry mowers and grain separators, and a large supply of team harness, were destroyed by fire early in July last. The origin of the fire is unknown. In consequence of the fire we were obliged to build some small stables in place of those destroyed. We have also made some corrals and done considerable

fencing on the Gee ranch, and made some slight improvements on the Moore ranch. The ranches are now in excellent condition

The live stock of the Company consists of:

90 Head of mules,
5 Head of horses,
18 Head of mares,
5 Head of colts,
4 Head of 1-year-old mule colts,
4 Head of 2-year-old mule colts,
2 Head of 3-year-old mule colts.

The cost of cultivation, including tools, and cost of repairs on irrigating ditches for the year beginning March 1st, 1880, and ending March 1st, 1881, as enumerated in the accompanying statement, amounts to $11,281 73. The product of the ranches, sold for cash and used for the maintenance of the Company's live stock, amounts to $17,404 73, showing a profit over cost of cultivation of $6,123.

The pasturing of about 60 head of animals is not included in these figures.

The Winter has been very favorable for the growth of alfalfa from seed sown in the fall of 1879 and spring of 1880, which last year yielded but one crop. We expect this year's crop of alfalfa will exceed last year's yield considerably, as alfalfa of two or three years' growth, under favorable circumstances, will produce two and even three crops per year.

There is considerable land under irrigation which is already broken, and only requires plowing and sowing. Last year the land in grain furnished only six months' supply. With some additional labor during the plowing and sowing seasons, I think we could raise sufficient grain for one year's supply.

The following is a statement of expenses and product of the Company's land under cultivation for 1880-81:

1880		1880		1880		1880	
April 10	To expenses for March.	$ 1,003 58		April 10	By sales in March	$ 86 35	
May "	" April	1,154 78		May "	" April	92 81	
June "	" May	1,320 87		June "	" May	35 00	
July "	" June	1,242 39		July "	" June.....	39 60	
Aug. "	" July	1,322 49		Aug. "	" July	605 84	
Sep. "	" August ...	1,843 51		Sep. "	" August	274 13	
Oct. "	" Sept	755 25		Oct. "	" September.	316 26	
Nov. "	" Oct	688 30		Nov. "	" October....	161 17	
Dec. "	" Nov	453 03		Nov. "	By Team acc't October	2,500 00	
1881	" Dec.....	439 39		Dec. "	Sales in November .	281 99	
Jan'y 10	1881			1881			
Feb. "	" January	471 08		Jany. 10	" December .	78 41	
Mch. "	" February .	587 06			1881		
	Gain	6,123 00		Feb. "	By sales in January....	452 30	
				Feb. "	Acc't Tunnel in Jan.	4,840 00	
				Mch. "	Team acc't in Feb	3,980 87	
					Value 208 tons hay on hand.....	3,666 00	
		$17,404 73				$17,404 73	

In my judgment the ranches are profitable, convenient and very necessary to the Company, particularly as long as mules are used in the Tunnel.

LOW GRADE ORES OF THE COMSTOCK.

It is difficult to get reliable data concerning the quantity or value of the low grade ores remaining in the Comstock Lode. Most of the upper levels and workings are inaccessible, as the machinery on the surface has been removed and many of the old drifts have closed in, consequently thorough examination cannot be made. It is the prevailing opinion, however, of those who are familiar with the early workings of the lode, that there are large quantities of low grade ores still remaining in the various mines which can be worked at a profit.

Should this work be commenced, it would not only become an industry of vast importance in itself, but would offer opportunities for exploring for new bodies of ores. The best information obtainable as to the value of low grade ore now being extracted from near the surface from the Crown Point, Belcher and Co. Imperial claims, is from the statement made to the Assessor for the quarter ending December 31, 1880. In this statement the average value per ton of the low grade ores taken from these mines is $\$12.40\frac{2}{3}$.

There is no doubt that in addition to the low grade ores of the value above mentioned, there are vast bodies

of ores of too low a grade to be worked at a profit without concentration. If there were some method by which these ores could be concentrated, they could be cheaply extracted and transported through the Tunnel and worked at a profit.

The lateral branches of the Sutro Tunnel are now advanced to a great length, and after connection is made with the Yellow Jacket shaft, they will aggregate a distance of about 9000 feet, extending from the Mexican on the north to the Yellow Jacket on the south. The advantage for extracting ore from these mines and the facilities offered for cheap transportation, together with the many natural advantages of reducing ores near the entrance of the Tunnel, are matters of paramount importance to this Company and to the mine owners of the Comstock.

The Sutro Tunnel has been constructed chiefly with a view of facilitating the working of the Comstock mines, by draining them and transporting their ores to a point where they can be worked cheaply; it is to be hoped that arrangements mutually beneficial will now be made to effect this end.

THE BRUNSWICK LODE.

The Brunswick Lode is intersected by the Sutro Tunnel at a distance of 11,600 feet from the Tunnel entrance and at a depth of 1361 feet from the surface. The quartz is of a lively and favorable character, and at this point the ledge has a width of about 100 feet. No prospecting has been done on this vein from the level of the Tunnel, except by two small drifts running north and south from the Tunnel a distance of 118 and 110 feet, respectively. Assays varying from $10 to $30 have been obtained from ore taken from these drifts. No cross drifts have been run or other explorations made to test the extent or value of this lode.

On the surface the vein shows well defined croppings and is traceable 2½ miles. It is estimated that $700,000 have been taken out near the surface from the various mines from the Monte Christo to the Occidental.

Prof. John A. Church, a mining engineer of great ability, who has examined this lode, speaks very highly of it. In writing of the quartz bodies of the Brunswick Lode, he says: "These form a magnificent system of quartz bodies parallel to the main lode, and so far as they have been examined quite equal to it in magnitude. Under any circumstances they are worthy of careful exploration, especially now that their fortunes have been greatly improved by the construction of a deep drainage adit. * * * * * All the known geological facts make them just as good ore carriers and just as promising quartzes as any the Comstock contains."

During the past year ore has been taken from the Monte Christo and hauled in wagons to mills in the Six Mile Cañon and worked at a profit. This ore is taken from a depth of 150 to 200 feet, and according to the returns made to the Assessor is paying $12.93 per ton. The Occidental on the south, in years past, has taken out a large amount of ore which paid even at the prices paid for hoisting and milling in those days. The Tunnel Company own a portion of this lode. The extent of their claim on the surface is about 650 feet, but owing to the deviation of the end lines of the claims adjoining, it lengthens out on the Tunnel level to 1270 feet. There is every indication that this vein contains paying ore, to what extent can only be ascertained by development. The advantage already acquired by the Tunnel in tapping it so far below the surface, is a great inducement to prospect it thoroughly. Should bodies of ore be discovered in this ground, it would not only enhance the value of the Company's property, but would stimulate other mine owners of this lode to prospect at our level. If paying ore were discovered and transported through the Tunnel, it would increase our revenue considerably.

The Tunnel is in fine order to this point, and by utilizing the water power near the entrance, ores from these claims could be reduced at very little expense.

Entertaining the opinion that this lode is worthy of exploration, I would respectfully recommend that work

be commenced upon it as soon as connection is made with the Yellow Jacket shaft.

MOUNT DAVIDSON.

Until recent years the belief was prevalent that the country west of the Comstock was a solid mass of barren syenite. Many are now of the opinion that Mount Davidson is formed of different rock, as porphyrite, andesite, quartz and seams of clay have been found west of the syenite, or diorite, which is known as the west wall of the Comstock lode. The developments in the McKibben Tunnel strongly favor the correctness of this opinion. Professor Church's report treats of this subject in a convincing manner. He says: "The McKibben Tunnel will serve to show that this mass, so long supposed to be an intruded or extruded dome, really presents very different characteristics, and is built up of successive layers. * * * * The McKibben Tunnel is opened in Spanish Ravine, which is cut in the diorite of Mount Davidson. The rock exposed may be arranged in three groups: First, going west from the Tunnel mouth we have 344 feet of diorite, containing comparatively little decomposed material and only two or three thin seams of quartz. This is bounded by 15 feet of andesite dyke, which, perhaps, acts as a hanging wall to the formation that follows. The next 350 feet may fairly be looked upon as a lode in the diorite, repeating quite accurately, so far as one section can reveal it, the characteristics of the true Comstock. Only 150 feet of this is solid rock. Of the remainder, 95 feet is composed in a massive quartz body. In approaching it the explorer passes through 70 feet of a decomposed rock, which may fairly be termed ledge diorite, to correspond with the ledge porphyrite of the Comstock. It has a blue clay and dips west. Then comes the 60 feet of quartz, and after 15 feet of intervening rock we have 35 feet more of quartz. That is succeeded by 50 feet more of decomposed rock, behind which lies andesite 30 feet thick, the black dyke of this formation. Here is a 'vein' 230 feet thick. Its

quartz is said to 'assay,' and occasional high assays from it are reported. This fact was not verified, but no one familiar with the Comstock would doubt it. Assays, and good ones, have been plentiful from the quartz lying in the diorite, though none of them have yielded ore in profitable amounts. Still, this is a silver impregnated quartz body. It lies 1,200 or 1,500 feet west of the Comstock lode, or rather of the position that it would probably have at the level of the tunnel."

On the east and west side of Mount Davidson are quite a number of quartz croppings, but no explorations have been made to determine their extent or value.

The Sutro Tunnel has been run 20,489 feet in a direct line towards the base of this mountain. The distance intervening between this point and a point beneath this summit of Mt. Davidson, is 6,000 feet. With its present terminus over 1,600 feet below the surface, I offer for serious consideration, whether it is not advisable to continue the Main Tunnel into Mt. Davidson, and explore the Company's property.

My opinion is, that the indications on and near the surface of Mt. Davidson, warrant further explorations in this direction. I would therefore recommend that the Main Tunnel be extended by a prospecting drift 2,000 or 3,000 feet.

Yours respectfully,

C. C. THOMAS,

Gen'l Superintendent.

SECRETARY'S REPORT.

SAN FRANCISCO, March 1, 1881.

To the President
of the Sutro Tunnel Company,

SIR:

Following is a Statement of the Receipts and Disbursements of this Company, as shown on the Company's books, for the year ending this date.

RECEIPTS.

BALANCES ON HAND,		
San Francisco Office, March 1, 1880	$ 33,379 30	
Nevada Office, February 12, 1880	3,131 23	
		$36,510 53
AMOUNTS RECEIVED,		
Mortgage, Jan. 4, 1877		202,353 78
For Lat. Tunnel constructed (S. F. Office)	$110,904 04	
" " " " (Nev. Office)	170,319 10	
		281,223 14
RENTS, SALES, ETC.		
Rents and Payments on account Land Sales		5,985 40
Sales of Hay, Vegetables, etc. (Nev.)		3,462 59
Miscellaneous Sales of Material		732 56
ROYALTIES (half of amounts due),		
Con. Virginia Mining Company	$ 22,991 50	
California " "	20,564 50	
Ophir " "	108 90	
Savage " "	199 03	
Hale & Norcross " "	725 40	
Union Con. " "	810 90	
Con. Imperial " "	98 00	
		45,498 23
TOTAL RECEIPTS		$575,766 23

DISBURSEMENTS.

Superintendent's Account		$357,034 67
Mortgage Interest		42,000 00
Bills payable		150,000 00
Interest on same		10,867 46
Salaries (Registrars, Secretary, etc.)		5,160 00
Office Rent		480 00
Office Expense		596 47
Office Furniture		3 25
Travelling Expenses		162 85
Telegrams		255 60
Miscellaneous		1,095 28
New York Office (Salaries, etc.)		4,916 32
Exchange		60 50
Balance on hand, S. F. Office, March 1, 1881	$ 807 16	
" " Nev. " February 12, 1881,	2,326 67	
		3,133 83
TOTAL DISBURSEMENTS		$575,766 23

Respectfully submitted,

PELHAM W. AMES,

Secretary.