existence and then rapidly declined, the development of quartz mining has been gradual in the State. It was first started by the Mexicans, who had long previously being engaged in the pursuit in their own country. But their method of working was very crude. They generally pounded up the quartz in mortars, or by making small circular pavements and working a large granite stone, which was pulled around by a mule. The quartz was pulverized between the stone and pavement. At the present time the "Hepburn" machines are generally the best. Mr. Hepburn, the patentee, informed me that through his agent, Mr. Mackay, of the Thames Gold Field, he has applied for a patent for this machine in New Zealand. It crushes about 8 tons of ore a day, and costs, in San Francisco, from 250 to 750 dollars, according to size. As arrangements have been made with an Auckland foundry to produce these machines, doubtless they will be in operation in the Colony very shortly, and any attempt to describe them, on my part, would therefore be useless; I will consequently proceed to give you such information as I have been able to procure as to the statistics of some of the principal quartz mines.

The richest tract of country in the State of California, as far as quartz mining is concerned, is about 200 miles long by 50 wide, and lies between Feather River and latitude 37°. Along this tract for a distance of 100 miles, in a straight line, runs the great outcrop of quartz known in California as the great "Mother Lode," the "Veta Madre" of the Spaniards. Here, too, lie the great "Hayward" mine, the deepest gold mine in the world, and now known as the "Amador," the "Princeton," the "Josephine," the "App," the "Eureka," the Sierra Buttes, and several others, too numerous to mention. Some few years ago Mr. Rèmond, of the State Geological Survey, visited this locality, and the following interesting statistics are taken from his report. The rock examined, in which the quartz was encased, was principally slate, granite, or greenstone:—

Number.	Average Width of Vein.	Cost of Extracting per Ton.	Cost of the Carriage to Mill.	Cost of Milling.	Yield per Ton.	Net Proceeds per Ton.
1	1 ft. 6 in.	3 dols.	1 dol.	1½ dol.	12 dols.	6½ dollars.
2	1 0	...	...	...	10 dols. 60 cents.	5 dols. 10 cents.
3	...	Not running at time of visit.				
4	...	Not running at time of visit.				
5	1 2	14 dols.	1¼ dol.	3 dols.	32 dols.	13¾ dols.
6	2 6	3½	2	3	18	9½
7	1 6	...	...	...	25	16½
8	0 8	...	Not running.			
9	1 0	4 dols.	2½ dols.	2½ dols.	40	31
10	1 6	...	...	...	40	31
11	3 0	4 dols.	1	2 dols.	14	7
12	10 0	1¾	87½ cents.	2	19	14 dols. 6½ cents.
13	2 0	1	1¼ dol.	¾	6	3 dols.
14	1 0	4	2	2	37½	29½
15	10 0	2½	40 cents.	2	12	
16	6 0	3	75	2½	18	11¾
17	1 6	2	50	6	27½	19
18	2 6	2	50	6	25	16½
19	4 0	4	None.	2¾	14	7¼
20	3 0	2½	50 cents.	2½	15	9½
21	7 0	4	50	6	17½	7
22	2 6	3	50	1	60	55½
23	1 0	9½	50	3½	25	11½
24	4 6	4¼	50	2¾	40	32½
25	9 0	2	25	1¾	6	2

"*Amador*" *Mine.*—This celebrated mine, the deepest quartz mine in the world, is situated at Sutter Creek, Amador County, and on the great "Mother Lode." It is better known, however, by the name of its former proprietor, Mr. Hayward, who, in March 1867, sold it to the "Amador Company," for the sum of 750,000 dollars. This company commenced operations in October 1867, and the dividends since declared, up to December 1869, have amounted to 720,000 dollars; viz., for 1868, 340,000 dollars, and for 1869, 384,000 dollars. It has been worked since 1852, and it is estimated to have yielded eight millions of dollars, but there is no trustworthy data upon this head to be had, for until its sale by Mr. Hayward no statistics were published. Except one shaft, the mine is at present unworked, in consequence of having caught fire. The depths of the shafts are—

The Panama Shaft	1,300 feet.
The San Francisco	1,200 feet.
The Latrobe	844 feet.

The average width of the vein is 12 feet, and the dip 75° E. The ground, at the mouth of the claim, is 900 feet above the level of the sea, and consequently the deepest is 400 feet below sea-level.

The following particulars are taken from the reports of the Directors:—

STATEMENT OF THE "AMADOR" OR "HAYWARD" MINE.

Date.	No. of Tons of Quartz Crushed.	Cost of Extracting per Ton.	Cost of Crushing per Ton.	Gross Yield per Ton.	Net Yield per Ton.
1868	30,794	4 dols. 67 cents.	2 dols. 30 cents.	21 dols. 56 cents.	14 dols. 59 cents.
1869	32,500	4 86	1 97	20 18	14 25

NOTE.—There are between 60 and 70 men employed on this Claim, or rather were at the time of the accident.