

sively and profitably, it is important to have them correctly described.

Whitney says, the gold is found in jacotinga, intercolated with argillaceous itacolumite slate of a *reddish blue* color, the gold being equally and invisibly diffused through it. The auriferous mass averages about 44 feet in width. It dips with the rocks of the vicinity at an angle of 45° to the south-east.

There are three mines known as Bahu, Cachoeira and Gambu. The principal shafts are sunk, inclining about 45° with the auriferous bed, and the ore is raised on a tram-road by cars. The Bahu mine in 1854, was 1,200 feet deep. As the ore comes up it is broken by *negro women*, and carried to the stamps. The coarse gold is caught on cowhides with the hair on, which are changed every two hours, while the slime is amalgamated in barrels. In each barrel are placed 80 lbs. of mercury to 16 cubic feet of slime, and the whole is allowed to revolve for thirty hours. The loss of mercury is 728 lbs. or 0.037 lbs. per cubic foot of slime, amalgamated. The yield of gold, about $\frac{5}{8}$ oz. per ton. The gold contained 20° silver.

These mines had been worked one hundred years previous to 1834, and had been abandoned as exhausted. The St. John del Rey Co. to whom they belong, commenced operations in that year, but did not work them profitably till 1858, since which time they have been steadily increasing in value. In 1846, they crushed 34,935 tons of rock, which yielded 1,465 lbs. troy of gold; in 1852, they crushed 82,642 tons, yielding 3,233 lbs. gold, being about 9 dwts. 9 grs. per ton.

The net profit on the fiscal year 1852 and 3 was £55,390 16s. sterling. The total profits from 1838 to 1852 being £312,621 sterling. These mines deserve attention, first, on account of the great size of the vein; second, on account of the great depth to which