

six to eighteen dollars per ton, and requiring expensive machinery to work it. Although there is gold enough on the island to pay off the national debt, but one mine, the Treadwell, has been developed into a paying institution.

In 1882 John Treadwell, a miner from San Francisco, came into Southeastern Alaska as a prospector. The Indians conducted him to the "Basin," just across from the island, where nuggets had been found. Not seeing what he thought would pay for working he went to Douglas, and among other properties was shown a location of one "French Pete." Being hard up Pete offered to sell for four hundred dollars. Mr. Treadwell made the purchase and returned to enlist capital in the enterprise. The next year he succeeded in erecting a ten stamp mill. A year's run was so satisfactory that a one hundred and twenty stamp mill was put up. In 1888 this was enlarged to a two hundred and forty stamp, making it the largest in the world. Here amid

giant employs the surplus water to wash off the surface of the ledge preparatory to mining, while the main stream is conveyed in underground pipes to a Knight's water wheel attached to the machinery. The water supply available is about 6,000 miner's inches.

A long tunnel runs from the mill, tapping the ledge 300 feet below the outcrop. Shafts have been sunk from the surface into this tunnel and are used as chutes. The plan of mining is to blast the quartz loose and convey it by these chutes into the tunnel, where it is loaded on cars and hauled to the mill. Two great, yawning holes, seemingly bottomless pits, have been blasted out, and a third will be begun ere long. Electric lights illuminate the pits and tunnel and the work never stops for darkness. The Burleigh drill takes the place of the sledge drill of other days. This drill is operated by compressed air, furnished by engines and conveyed by hose. Two men manage this apparatus, carrying it from point to point and drilling holes ten to twelve



AN ALASKA INDIAN BURIAL ISLAND.

the deafening roar of falling stamps twenty thousand tons of quartz are ground every month at a cost of about \$1.65 per ton. The mill runs day and night, rain and shine, Sunday and every day, the hands working alternately two weeks day shift and two weeks night shift, but the ledge is practically inexhaustible and the owners have a lifetime income.

The six hundred horse-power required to run the ponderous machinery is furnished by water from mountain streams. A ditch, running along the side of the "Ridge" has been dug thirteen miles in length, tapping Fish creek, Kawee creek, Eagle creek and numerous smaller mountain streams. Four years has this been in process of construction, and another year will be required to complete the work. By means of flumes across the chasms and tunnels blasted through solid rock the entire water supply of the northeast side of the island is conveyed in one channel to a point five hundred and twenty feet above the mill. A hydraulic

feet deep and two inches in diameter. Charges of Hercules blasting powder are placed at the bottom of these, and at regular times, when the change of hands is made, they are set off. As the heavy blasts are discharged immense masses are loosened and fall over into the pit. The sounds from the shots roll through the mountains and are reverberated back, furnishing the only thunder Douglas Cityites ever hear.

Iron cars, each holding one and one-third tons, are pushed under the chutes, when a miner opens the outlet allowing it to fill. Twelve cars compose a train and a small engine draws them to the end of the tunnel into the upper story of the stamp mill. The ore is dumped into bins from which it is fed automatically to the batteries. The batteries are heavy cast iron mortars, into which the shoe of the stamp falls. A constant stream of water running into them facilitates the grinding. The stamps are iron rods, each weighing six hundred pounds, and armed at the lower end