

generating current at 5,000 volts, with a frequency of 50 cycles. The current is stepped up in the transformer-house to 50,000 volts, and transmitted to Waikino, a distance of $44\frac{1}{2}$ miles. It is then stepped down and used in the Waikino mill at 500 volts. Part of the current is transmitted to Waihi at 11,000 volts, and is stepped down at the mine to 2,000 volts, at which pressure it is used on the motors.

Waihi Grand Junction Gold-mining Company.—All development underground has been at a standstill from the 13th May to the 31st December, owing to a strike; therefore the work done covers only a period of about four months and a half. No. 3 shaft was sunk, making a total depth of 183 ft.

No. 6 level: South-east crosscut—Advanced 700 ft.; total length, 876 ft. From 704 ft. to 716 ft. was quartz. This proved to be the Royal lode; average assay value, £3 3s. 7d. per ton. At 834 ft. the George lode was cut, showing a width of 6 ft. 6 in.; average assay value, £2 0s. 6d. per ton. North-west crosscut—Advanced 329 ft.; total, 437 ft. From 108 ft. to 418 ft. this drive passed through a mixture of quartz and country assaying from 7s. 3d. to £1 0s. 1d. per ton. Dominion lode, east—Drive advanced 128 ft.; value, low. A winze was sunk 45 ft. east of the chamber to a depth of 19 ft.; lode mixed with country; assays averaged 12s. 9d. per ton. Dominion lode, west—A winze was sunk 15 ft. west of shaft chamber to a depth of 21 ft. Exposed the foot-wall, but not the hanging-wall; width, 3 ft. 6 in.; assay value averaged £4 11s. 1d. Republic lode, west—The drive on this lode junctioned with the main body of the Empire lode 80 ft. west of the south-east crosscut; average width exposed by crosscutting, 18 ft. Republic lode, east—Advanced 123 ft.; total, 184 ft.; width, 4ft. 4 in.; average assays, £2 13s. 9d.; both walls exposed (from 60 ft. to 95 ft.). From 95 ft. to 184 ft. the reef was composed of stringers only; no value. Empire lode, foot-wall branch—East drive advanced 151 ft.; total, 244 ft. After driving 71 ft. the junction of the main Empire lode was met with. Crosscuts proved this lode to be over 20 ft. in width, and payable. Drive west advanced 225 ft.; total, 296 ft. At this point it junctioned with the Empire main lode, west. This lode has been broken out the full width, and stoping-timbers placed in position up to 250 ft. west of crosscut. At this point the lode split, and a small branch 15 in. wide running to the south wall was driven on for 8 ft., giving very high assay value; but this gives indications of petering out. A rise was also put up 91 ft. above this level at a point 115 ft. west of crosscut; width of lode, 3ft. 6 in.; south wall only exposed; value highly payable. Royal lode—Drive advanced 29 ft. east of crosscut. At 5 ft. east passed through a small flat fault dipping to the east. East of this fault the lode was split into stringers divided by bands of country. Walls not clearly defined. The average of the assays taken, including the country and stringers, was £1 18s. 7d. for a width of $9\frac{1}{2}$ ft. A rise was also put up 16 ft. above the level, but so far the lode is split and mixed with country. Royal lode—West drive advanced 50 ft. from crosscut; walls of lode irregular; average assay value from a width of 5 ft. 7 in., £3 11s. 3d. Martha lode—Drive west advanced 72 ft.; total, 135 ft. From 20 ft. to 50 ft. a band of mineral appeared cutting out in the roof; from 65 ft. to 72 ft. the drive was in country, and work discontinued. Drive east advanced 109 ft. No walls exposed; quartz, low grade. Mary lode—At a point 430 ft. from the shaft a rise was put up to connect with No. 2 winze. At 77 ft. above the level this rise is in country rock, with a few stringers of no value.

The following is a summary of development done: Main and intermediate drives on lodes, 1,263 $\frac{1}{2}$ ft.; crosscutting lodes from drives, winzes, and rises, 252 ft.; rises on lodes and through country, 408 $\frac{1}{2}$ ft.; winzes on lodes and through country, 128 ft.; driving and crosscutting through country, 1,131 $\frac{1}{2}$ ft.; shaft-sinking, 172 ft.: total, 3,356 $\frac{1}{2}$ ft.

Power-plant extensions: Up to the 31st December, the extensions to the engine and boiler rooms and the three bays of the switchboard annexe have been erected. The new A.E.G. turbine auxiliaries and switchboard-control panels have been installed, and steam, air, and water pipes coupled to the machines.

During stoppage of work by the strike, the air, water, and ventilating mains have been very badly corroded, and on resumption of work will require extensive repairs and replacements. The tramway-tracks have also been eaten away by acid water dripping on them. Beyond these repairs the flooding has apparently caused no other material damage.

Waihi Extended Gold-mining Company (Limited).—No. 6 level (1,100 ft.): Development was commenced by driving north-west 70 ft., at which point the north-west lode was intersected. Twenty feet of driving was done on this lode; value, low. The south-east crosscut is now in a distance of 350 ft. At 245 ft. the south-east lode was intersected, but owing to the mine being shut down very little work was done to prove its value. No. 6 winze was connected with No. 6 level, which greatly improves the ventilation.

Pride-of-Waihi Gold-mining Company.—This mine has been under protection during the year, but I am informed that a meeting of shareholders is being convened in order to decide on future operations.

Waihi Consolidated Gold-mining Company.—Owing to financial difficulties, this claim has been under protection during the year.

Waihi Standard Gold-mining Company.—No. 4 level (257 ft.) was cleared out, and it was found that a reef 4 ft. 6 in. in width had been driven north 54 ft. and south 80 ft. The former was advanced 90 ft., and maintained its width, with encouraging value. A winze was also sunk, the reef proving consistent in width and value. During the labour troubles this mine was under protection.

Owharoa.

Rising Sun Gold-mining Company.—Work during the year has been confined to driving the low-level tunnel, which is now in a total distance of 2,166 ft. Two lodes have been intersected, giving good dish prospects and payable assay value.