

17 in. and 26 in. diameter, and 3 ft. 6 in. stroke; working at sixty-five revolutions per minute it will deliver 1,680 cubic feet of free air per minute at 75 lb. pressure per square inch. On the south side of the Waitawheta River chambers have been excavated for pumping- and winding-engines. The cylinders of the winding-engine are 12 in. in diameter and 18 in. stroke. The diameter of the drum is 59 in. and the face 4 ft. The pumping-engine has a 14 in. cylinder by 24 in. stroke, fitted with slide-valve with Meyer's cut-off. The whole of this plant is being supplied by Messrs. Fraser and Chalmers (Limited), of 43, Threadneedle Street, London. A 10 ft. Pelton water-wheel (3 nozzles) will be attached direct to the driving-shaft of the compressor. The water-race to supply power for the air-compressor is a mile and a quarter in length, with a present capacity of sixty sluice-heads, the pressure being 32 lb. per square inch.

A large amount of prospecting work has been done in driving cross-cuts, trenching, &c., in the following mines, but no discovery of any value reported: Hercules, Deep Lead, Excelsior, South British, Karangahake, Mariner, Rothschild, Golden Fleece, Wealth of Nations, Union Jack, Asteroid, St. Patrick, Crown Imperial, Prince Regent.

In the Stanley a considerable amount of prospecting work was done, and gold has been discovered in a reef formerly worked in the original Prospectors' Claim, but no returns are reported.

Sterling Mine.—Work has been steadily carried on and the reefs driven on.

Waverley Mine (Area, 64 acres).—This mine adjoins the Woodstock, and extensive driving works were carried on and reefs cut carrying gold, but no returns have yet been reported. Mr. Tregoweth, manager of the mine, thus describes the result of operations:—

During the past twelve months we struck a large lode, and operations have been confined to its development. We have driven about 400 ft. on it, and the stone proves to be of a sugary friable nature, carrying a little gold, but not sufficient to make it payable. The lode was followed into the Woodstock ground, but as the dip is towards the Waverley ground we will get this lode at the next level. This is an unusual lode for this district, having two clay walls, and the gold in the stone being similar in character to that at the Thames, whilst the formation is a blue sandstone similar to the Thames formation, and is an entirely new development in this locality, nothing being known of it outside the Waverley ground. Work has been stopped on this at present, as it will be necessary to go deeper, and we are now cross-cutting for the old Prospectors' lode, which the manager of the Stanley has picked up in his ground, where it gives good prospects of gold. We are in hopes of getting it in our ground carrying gold, as the country is most favourable for gold where driving is now being carried on.

Imperial Mine (Area, 60 acres).—This mine adjoins the Crown, and, although there are several gold-bearing reefs in the ground, no quartz has been crushed. The work has chiefly been in driving a low level at a depth of 300 ft. below the surface, and in driving and sinking winzes in the levels above. Eight men were employed.

Prospecting operations have also been carried on in the Ravenswood, Golden Giant, Crown Nimrod, New Shotover, Victor-Waihou, Mere, Rotokohu, Leap Year, Dickson's Lead, Waitawheta, Pandora, and Golden Age.

Ohinemuri Syndicate Mine (Area, 700 acres, partly freehold and partly on Crown land).—The property is situated at Owahoroa, and includes the claims formerly known as the Smile of Fortune, Radical, Cadman, on the Ohinemuri River, and extending to the Mangakara Creek, taking in Bein's and Elliott's freeholds. A prospecting drive from the Mangakara Creek was continued 1,130 ft., and a shaft sunk 20 ft. for ventilation. It is intended to sink a main shaft near the Owahoroa battery to work the Smile of Fortune and Radical reefs below the water-level. Twenty-three wages-men were employed.

Prospecting works have also been carried on in the Rising Sun, Ophir, Maritana, Owahoroa, United, Dawn of Hope, Fern Spur, J. G. Ward, Kinsella's Freehold, Teutonic, Tandem, Ruapehu, Crescent, Fabulous, Unexpected, and Golden Stream Claims.

Heitman's Freehold.—The shaft which was sunk to a depth of 255 ft. last year was deepened to 267 ft., and a level driven 266 ft., but as the formation was unfavourable for reefs no discovery was made.

Waihi District.

Waihi Mine (Area, 346 acres).—This mine continues to maintain highly profitable yields. The following particulars will show the character of the work done and the extensive machinery employed, also the results of the year's operations: The No. 1 shaft has not been made deeper, but No. 2 shaft has now reached a depth of 415 ft. The length of the adit driven through the hill is 3,200 ft., and the total drift at adit-level is 6,400 ft. The lowest level worked is 280 ft. below the collar of the shaft. The reefs worked are the Martha reef, north-east and south-west, varying in size from 12 ft. to 52 ft. in width; Welcome reef, parallel towards the east end, and then bending to the south, travelling west, when it again becomes more parallel with the Martha reef—the Welcome reef varies from 1 ft. to 30 ft., the average width being 12 ft.; Surprise reef, between the Martha and Welcome reefs, is from 1 ft. to 2 ft. wide. The No. 2 shaft has been sunk 123 ft. during the year. No. 2 level: Total driving on Martha and Welcome reefs, 1,902 ft.; No. 1 level, 1,697 ft.; adit-level, 2,677 ft.; and in the upper levels, 701 ft.: a total of 6,977 ft. of driving during the year. The tonnage of ore forwarded to the mill from Welcome reef was 21,681 tons, and from Martha 16,704 tons. The machinery used at the mine is as follows: No. 1 shaft—compound pumping-engine, 12 ft. by 20 ft.; winding-engine, 20-horse power, 16 in. by 3 ft. stroke; one Cornish boiler, 25 ft. by 5 ft.; one Cornish boiler, 26 ft. by 5 ft., one 14 in. pump, pump-rods, balance-bobs complete; one 10 in. draw-lift pump; one air-compressor; one Evans pump; one duplex pump (Tangye). No. 2 shaft—one Hathorn Davy 19 in. vertical ram pump, 10 ft. stroke; one Tangye sinking-pump; one steam crab-winch; one Tangye double-cylinder winding-engine; one Tangye 2-ton crab-winch; four multitubular boilers (Anderson and Co.). The mill and machinery consists of ninety stamps (870 lb.), two stone-breakers (one Wheeler, one Gate's crusher), one berdan,