

view of prospecting the reef at a depth of 130 ft. below previous workings, but, as this drive was not of convenient size to fulfil the purpose for which it was intended, it was decided to abandon it in the meantime, and to cut the reef in a more convenient place. An adit for this purpose has been driven, and is now in 202 ft., and it is expected the reef will be reached in about 220 ft. This will admit of the reef being worked at deeper levels under the old workings, and, as gold is left in the floor, the future prospects appear to be favourable. The quartz is of a friable nature, easily mined and crushed. No explosives are required in breaking on the lodes, although the adjoining country is of a hard nature. The workings have all to be closely timbered, and this forms the chief item of expense. The stone is crushed by a small three-head battery, running from 95 to 120 drops per minute, with about a $6\frac{1}{2}$ in. drop, and crushes from $2\frac{1}{2}$ tons to 3 tons each eight-hour shift worked. A Pelton wheel of about 3-horse power is sufficient to drive the battery. The gold is free, and easily amalgamated, most of it being saved in the mortar-box and on the top plate. The quantity of stone crushed was 292 tons, for a yield of 303 oz. 1 dwt. 18 gr. of retorted gold, valued at £3 18s. 4d. per ounce, or a total value of £1,187 1s. 10d. The mine is about 3,000 ft. above sea-level, and in the winter months work is carried on with difficulty. Timber is brought by bullock-team from Heriot Railway-station, and is obtained from a bush at a distance of fifty to seventy miles. The battery is now being shifted to a more convenient site to save handling of stone. An average of five men have been employed during the year.

Lawrence District.

Gabriel's Gully Prospecting Association.—A report from the Inspector of Mines says,—

"Since my last visit the prospecting works have very considerably advanced at the low-level tunnel, but the reefs have not been picked up beyond the cross-cut. A drive has been commenced to prospect the solid country through the main (Blue Spur) fault. At about 28 yards beyond the fault a small quartz leader was cut. This is being followed up, and the main drive is also being continued. The latter shows patches of quartz. Mr. E. Johns is in charge of the works, three men being employed. Tunnels, &c., all in first-class order."

Burnt Creek Mine (Area, 27 acres; owners, Burnt Creek Gold-mining Company; mine-manager, Arnold Sturm).—This claim is situated at Table Hill. Three lines of reef have been prospected, varying in width from 2 ft. to 6 ft. The quartz presents a white glassy appearance, and is very poor. 1,297 tons was crushed at a battery of ten stamps which is on the ground, the yield of gold being 95 oz. The battery is driven by water-power. The whole plant, including race and dam, is valued at £1,600. Six men were employed during 1898, but very little work has been done during the present year.

Milton District.

Canada Reefs (Area, 50 acres; owners, Messrs. Ritchie, Andrews, and Lawson; manager, W. G. Mouat).—This mine is worked from two shafts at the respective depths of 70 ft. and 60 ft. Four levels have been opened and a great amount of development work carried out during the year. The battery consists of ten heads of stamps of 8 cwt. each, driven by a 12-horse-power Pelton wheel. The quantity of quartz crushed for the year was 838 tons, which yielded 103 oz. 8 dwt. 2 gr. of gold, valued at £389 12s. 11d., extracted by amalgam. Eight men and two boys were employed. Mr. W. G. Mouat, who has the mine on tribute, gives the following full description of the work done for the year:—

"The claim is held by me on tribute, and so far the work has consisted chiefly of erecting gear, putting down tram-lines, and opening up. No. 1 inclined tram-line is 1,200 ft. in length, and descends to battery. The head of the tram-line is at an elevation of 450 ft. from battery; it is self-acting. The trucks are of 15 cwt. capacity, and are capable of lowering 100 tons per day if necessary. No. 2 line is from No. 1 shaft to head of No. 1 line, a distance of about 300 ft. The lowering gear consists of a surging-drum $2\frac{1}{2}$ ft. in diameter working on a 3 in. shaft, attached to which is a Crown wheel, also $2\frac{1}{2}$ ft. in diameter, geared by intermediate shaft $2\frac{1}{2}$ in., with pinion 1 ft. in diameter, and brake-wheel 16 in. worked by a 6 ft. lever. There is also a safety-brake attached to the surging-drum to be used in case of accident. This brake grips both drum and rope. The rope is $\frac{3}{8}$ in. flexible crue-steel wire, running on hardwood rollers 40 ft. apart. The trucks are fitted with self-acting discharging gear. Within 30 ft. of the lowering gear a hopper (No. 1) is erected, under which the trucks run for filling. There are three distinct lines of lode, known as Ocean View, Canada, and Lawson's, all of which run parallel with each other, east and west, at a distance of about 300 ft. apart. No. 1 shaft is sunk in Ocean View line, about 300 ft. from lowering gear, to a depth of 70 ft. From 5 ft. well-hole of shaft a level is driven west 30 ft. and east 70 ft., the lode varying from 2 ft. to 3 ft. A portion of the stone is being stoped out. The stone from this shaft, which was sunk for prospecting purposes, is hauled by windlass. The ore is conveyed to No. 1 hopper by tram-line. No. 2 shaft is sunk on the same line of reef, about 1,000 ft. east of No. 1 shaft, to a depth of 60 ft., and a level is driven east 60 ft. and west 10 ft., and the stone above partly stoped out. The stone pinches from each end of the drives, and varies from 12 in. to 4 ft. The ore has been hauled by windlass, and conveyed to No. 1 hopper by dray, at a cost of about 1s. 3d. per ton. No. 3 shaft is sunk on the Canada line of reef, opposite No. 2 shaft, to a depth of 60 ft., and a level driven west about 30 ft., the lode varying from east 1 ft. to west 8 ft. Stoping has been commenced. Poppet-heads are erected over the collar of shaft, and the buckets pulled by whip. The stone is emptied into the hopper at shaft, and is conveyed by drays to hopper No. 1. Lawson's reef is being prospected."

Waipori District.

O.P.Q. Gold-mines, Waipori (Mine-manager, C. Rillstone).—Mr. John Hayes, Inspector of Mines, who has recently visited the district, gives the following account of this mine and its workings:—

"Since my last visit work appears to have been pushed forward with a good deal of energy. The main shaft, 12 ft. 6 in. by 4 ft. has been sunk to a depth of 220 ft., a new Robey Undertype