

cut has been driven west in the foot-wall for 87 ft., and from the lower tunnel a crosscut was similarly driven for 121 ft. without meeting with any parallel reef. Some 400 tons of quartz has been taken out of these tunnels, and, I am informed, shows a yield of 14 dwt. per ton on being assayed. The battery-site is being prepared, and a good portion of the machinery is on the ground. (22/2/99). The sinking of the main shaft is being continued, and at this date is 250 ft. deep. The low-level adit tunnel, previously named, is now connected by a crosscut to the shaft at a depth of about 70 ft. from the surface. The pump now delivers its water to this level. Both adit tunnels have been continued on the line of reef, and have passed through old workings into a fair thickness of stone. The battery-plant is not yet erected, but portions of this work are in progress.

Gabriel's Gully Prospecting Association, Lawrence.—(13/9/98): Since my last visit the prospecting works have very considerably advanced at the low-level tunnel, but the reef has not been picked up beyond the "cross course." 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 work, three men being employed. Tunnels, &c., all in first-class order. The operations of the association were specially reported on to the Hon. Minister of Mines under date of the 26th September, 1898.

Excelsior Quartz-mine, Old-man Range (S. W. Gray).—(17/1/99): Five men are employed here. The reef consists of granulated quartz, and averages 2 ft. 6 in. thick, but sometimes attains to a thickness (or width) of 6 ft. It is also variable in its inclination, in this respect resembling the reefs at Carriek Range. The nature of the country rock necessitates very close timbering, and Mr. Gray takes considerable care over this. At present all the stone is raised up a small shaft by hand power, but an adit is being driven at a lower level, and when this cuts the reefs the shaft will be dispensed with for hoisting purposes. The battery is a light one, with three heads of stamps driven by a 3 ft. Pelton wheel, with a water pressure of 43 lb. per square inch. Owing to the high altitude of this mine (some 3,000 ft. above sea-level) work can only be carried on for eight or nine months in the year.

Excelsior Extended Quartz-reef, Old-man Range (Holden and Gray).—(17/1/99): A new mine is being opened out here about a mile east from Gray's Excelsior Mine, and at a level some 500 ft. lower. The reef is supposed to be the same as that worked at the Excelsior, and where found at the surface at this new claim appears very broken, but it is expected to turn out more solid when followed further into the mountain. It is of the same character as up above (granulated) and a dish I saw washed showed a good prospect of rich gold. Mr. Holden states that this gold realises £4 per ounce. Two levels have been started: the lower one is 79 ft. in and below the reef, the upper one is on the reef with stone 1 ft. 6 in. wide at the face. It is intended to erect a small battery here. The gold here and at the Excelsior Claim is very pure and easily saved; it amalgamates very readily.

Rough Ridge Reefs and Battery.—(22/9/98): Nothing is being done here at present.

Bendigo Reefs (Cromwell Proprietary Company, Limited).—(2/3/99): At my previous visit the mine here was being worked on tribute. Since then certain changes have taken place in the administration of the company's affairs, and the company now works the mine by day-labour. Mr. J. A. Dobson, late of the Thames District, has recently been appointed to the management. On this date I found work going on in the old level (where the tributers were working last year), and also in the south branch of the reef at the 150 ft. level. Ventilation, &c., was very satisfactory, but I had to again find fault with a workman for carelessness in respect to explosives. Nineteen men are employed underground here. At the main deep-shaft no work is being done except pumping. Some 600 yds. to the east of this shaft a new shaft 9 ft. by 4 ft. has recently been commenced, and is now down 60 ft. It is proposed to sink down to 200 ft. and then open out, but Mr. Dobson says there is a possibility they may put in a crosscut at 100 ft. down, to prove the reef at that depth. This shaft is further east than any existing workings on the company's claim, and will command a line of reef of some 2,000 ft. in length to the boundary of the claim. About half a mile to the east of the claim there are some old shafts on what is supposed to be the same line of reef as that worked by the company. Including contractors for the new shaft, and battery-men, thirty-five persons are employed.

Carriek Range Quartz Reefs, Bannockburn.—(7/3/99): Messrs. Lawrence Brothers are working the Day-dawn Mine, which includes the old Caledonian Mine, this latter being at level some 130 ft. higher than the former. The reef is nearly vertical, and averages 18 in. wide. Three persons employed. Messrs. Lawrence estimate they have seven or eight years' stone to work at their present rate of output. The gold obtained is said not to average more than $\frac{1}{2}$ oz. to the ton of stone, which gets more refractory as it goes deeper, the foreign metals being arsenic and antimony. The battery is near the low-level (Day-dawn) adit, and has four heads of stamps (800 lb.), driven by a hurdy-gurdy wheel receiving its water at a pressure due to a head of 250 ft. vertical (108 lb. per square inch). There is also a berdan. Water is obtained from the Carriek race (which supplies part of the Bannockburn diggings), and conveyed to the battery by 7 in. pipes, 450 ft. in length. At the Star Mine and battery (belonging to Mr. James Lawrence) three persons are employed, surface stone only being got at present. This is said to yield 15 dwt. of gold to the ton. The battery has ten heads of stamps, and is driven by a hurdy-gurdy water-wheel. Water is obtained from the Carriek race, and is conveyed through 900 ft. of 7 in. pipes for a vertical distance of 210 ft. On the opposite side of the ridge from the Star Claim a prospecting tunnel is being driven by Mr. T. Holliday, who has a claim of 54 acres. The tunnel is in some 300 ft., but the reef not yet cut. Nothing has been done at the Young Australia since my last visit, but I hear that some fair stone has been met with in the locality by a party prospecting, but no work yet done of a permanent character.

Tipperary Mine, Macetown (Westralia and New Zealand Gold-explorers, Limited) (W. J. Stanford, manager).—(15/10/98): The winze-shaft, which was being sunk at my last visit, is down over 90 ft., and a level opened out on the line of reef from both sides of the winze, that on the east