interruption until a fresh outbreak occurred in No. 3 incline on the 24th April, 1901. Unfortunately, an efficient natural water-supply was not available; but the services of the Greymouth Fire Brigade, supported with engine-pump, were effective in locating and suppressing the fire in four days. Experience having thus taught the management the urgency and economy of providing an efficient water-supply for future emergencies, prompt action was taken to lay down a direct 3 in. pipe-line from Coal Creek, 3,500 ft. in length, fitted with suitable T branches, and nozzles on each heading, capable of discharging 6,000 gallons per hour with a head-pressure equal to 150 ft. Thus the heated areas over the most important sections of the mine are capable of being suppressed without loss of time. It is, however, to be regretted that, notwithstanding the strict daily supervision, and constant precautions taken to insure absolute safety to life and property, spontaneous ignition continues to be a growing source of trouble and anxiety, especially where heating occurs in soft pyritical coal underlying large bodies of loose sand discharged from the rapidly disintegrated soft-sandstone roof, a condition which practically defies percolation, and necessitates shafts to be sunk through the heated *débris* to freely admit full volumes of water into the seat of fire. Speaking generally on the working-conditions of the mine, expenditure extending over two years was incurred in crosscutting and grading No. 1 west main haulage-road through a series of extensive displacements in the bottom seam, when, after driving a distance of 400 ft. through thin and inferior coal, the coal-seam ultimately nipped out. Having considered the uncertain position of the old workings with regard to fire, and also that the coal-seam could be more practically and systematically developed from the deeper levels, the management, at this juncture, decided to abandon further prospecting, and pillar-extraction was commenced homeward from the fault-boundary. So far the method of extraction adopted to win the highest percentage of coal with safety is by splitting and working the stumps backward, a system which may be considered doubtful, as overhead pressure, resulting from the exhausted ground, will act as a second factor of danger in creating spontaneous fire, besides involving a large cost in unrecovered timber. Favourable progress is made in the development of the dip section under steam-pumps, preparatory to driving permanent water-lodgment for electrical installation, which has just arrived. This installation, supplied by Chandler and Taylor, has automatic cut-off 8 in. diameter horizontal cylinders with 10 in. stroke, and range of speed from 270 to 350 revolutions per minute, and is connected direct to a 4-pole generator with a kilo-watt capacity from 18 to 22, capable of driving one of Evans's 9 in. by 9 in. treble-barrel horizontal ram-pumps. The plant is fitted with compound clutch-gear suitable for wire rope or direct motor movement. The steam-power has been recently increased by a 40-horse-power boiler of the Lancashire type, while Anderson, of Christchurch, is building a new Cornish boiler, which is expected early at the colliery. Reports are kept to date. Air-measurement, 27,000 cubic feet per minute.

Brunner Mines (owners, Greymouth-Point Elizabeth Coal Company; Robert Alison, mining manager).—Considering that the gross tonnage mined was won from partially exhausted pillar areas, it is eminently satisfactory to note that the output for the year 1901 shows a substantial increase of 6,613 tons as compared with the preceding year.

Brunner Dip Mine (John Coulthard, mine-manager).—(12/12/1901): The rise and dip areas inside the "big fault" line having become totally exhausted and flooded to the adit level in the commencement of the year, trade requirements necessitated that the pillar area outside the fault-line should be opened from the adit level in conjunction with the two already working new districts. Subsequently, however, to withdrawal of the workmen from the old to the new workings a complication occurred between the management and the union with regard to lighting, as safety-lamps had been exclusively used in the inside workings, while naked lights were used in the rise districts outside the fault. However, an amicable solution of the difficulty was arrived at, and naked lights declared universal. The principle of pillar-robbing formerly practised in this district, before it was abandoned, incurred unnecessary risk to pick out the remaining stumps next the fault, the roof and floor being met together. The sizes of unworked pillars are now, however, found to be more uniform. Ventilation under direct fan control receives strict attention, and a measured air-volume of 20,000 cubic feet per minute is constant. Reports and other provisions of the Act are strictly kept.

Ladysmith Mine (Joseph Herd, mine-manager).—(12/12/1901): Practically this recently opened central district of old pillar-working has not only proved a profitable factor in maintaining the increased output from the Brunner Mine, but a source of employment was opened for a large number of residents. The extraction of coal from this district has so far been very successful and free from serious accident. Mechanical ventilation has taken the place of natural since direct communication with the adit-level district was completed, the whole system being under direct control of the fan. Reports are kept to date. Official examinations strictly made. No serious accidents reported.

Brunner Rise Mine (Maurice Dando, mine-manager).—(12/12/1901): As proof of the rapid exhaustion of the Brunner Mine, I have to record that the rise and dip sections of the Coolgardie areas are successfully worked out, and a new face of pillars opened near the outlet of the main self-acting haulage incline intersecting what is locally named the "fireclay" district. This area of workings (recently opened by two parallel rise headings) is calculated to exhaust the pillars located between the Ladysmith and Coolgardie districts, from which the supply of fireclay for brick-making is chiefly obtained. The general characteristics of the roof are good, and the coal is of splendid quality. Reports are kept to date.

It is noteworthy that the monthly inspections reported at the colliery office, under section 33, subsection (46), of the Coal-mines Act, by the persons appointed on behalf of the miners are highly commendable.