equipment, except that the old-fashioned cam-shaft, cams, and tappets have been replaced by those from the Inkerman battery. The old hoisting water-wheel was dismantled and replaced by a Pelton, by which power is provided for the dynamo, sawmill, and lathe, and baling from the vertical shaft when required.

Golden Fleece Mine.—In the early part of 1906 attention was restricted to making a connection between No. 6 level and the bottom of the Ajax shaft, at No. 5 level. This was successfully carried out, and an engine installed at the brace of the shaft, and the upper portion of the shaft retimbered during the first four months of the year. About the middle of May stoping was commenced with a small gang of men, and by the 18th June sufficient quartz was broken to warrant the battery working two shifts per day, and on the 24th June crushing was extended to full time on three shifts, and has since continued. Making the connection between Nos. 5 and 6 levels in the old shaft was an expensive job, but the outlay was amply justified on account of the time saved per man per day when working bank to bank from the Ajax shaft, as compared with bank to bank from the mouth of the low-level tunnel. The principal developements effected consist of driving No. 14 level from a point 185 ft. north of the crosscut to a total length of 678 ft., along which distance a comparatively small amount of stone was discovered. North of the crosscut, rising from No. 14 level was on the 22nd December completed to a height of 121 ft. It is proposed to drive No. 14 level to the furthest-known limit of the stone, make the necessary connections for ventilation and the passing or ore, and then sink an incline shaft on the northern end of the ore-body to determine value and extent at depth. Since the battery resumed crushing (the first return for the year was at the end of July) 6,725 tons were milled, yielding 2,623 oz. 10 dwt. of bullion, valued at £10,745 17s. 9d., or £1 11s. 11·496d. per ton crushed. Sulphurets to the value of £510 were sold to the smelter, whilst 4,460 tons, representing 66·319 per cent. of the tonnage crushed, were cyanided, yielding bullion to the value of £1,334 7s. 7d., or 5s. 11·805d. per ton treated. Of this amount 2s. 1·639d. was consumed in working-costs, leaving 3s. 10·166d. per ton profit.

Progress Mine.—Although mining operations have been steadily maintained and development actively pushed throughout the year, exploitations have failed to expose any fresh deposits except on No. 11 level, where an ore-body of value was ultimately encountered at a driven distance of 1,100 ft. from the main shaft. In all, development comprised 3,715 ft. of driving and crosscutting, and 785·5 ft. of rising and sinking, at a cost of £6,764 14s. 8d., besides which 4,499 ft. of diamond drilling was undertaken at a cost of £2,237 11s. Stoping has been continued in a general manner throughout the mine from No. 11 level up to No. 4. Some new blocks were started and some of the old ones exhausted. Alterations to the surface equipment were not important, except that a Forwood Down's pan was purchased and erected for sliming experiments, and a small Ball mill for slag-crushing purposes, &c. The 65-stamp battery crushed 59,100 tons, yielding 18,073 oz. 19 dwt. of bullion by amalgamation, equal to 6 dwt. 2·793 gr. per ton. Value of bullion amounted to £75,160 2s. 10d., or £1 5s. 5·218d. per ton, and during the year 886·9 tons of pyritic concentrates and slimes were shipped to the smelter, realising £11,797 10s. 2d. At the cyanide-works 38,410 tons of sands, representing 68·376 per cent. of the tonnage crushed, yielded 5,403 oz. 8 dwt., valued at £14,947 5s. 1d., or 7s. 9·396d. per ton treated. Of this amount the sum of 1s. 6·367d. was consumed in working-cost, leaving the handsome profit of 6s. 3·029d. per ton. An analysis of the treatment-cost is of interest, on account of the low figure achieved: Wages, 4·969d. per ton; cyanide, 10·701d. per ton; zinc and chemicals, 2·054d. per ton; general stores, 0·499d. per ton; assay office percentage, 0·144d. per ton: total, 1s. 6·367d. per ton. Experimental work has been extensively undertaken towards the discovery of a more successful mode of treating the battery-slimes, and although very exhaustive tests and trial roasts were put through the chlorination-works, the results obtained only prove that, whilst a fair extraction can be had from a trial roast, with the furnace empty except for the trial parcel, the same results cannot be obtained when the ordinary working-charge is being treated. Mr. Alfred James, specialist and consulting chemist to the company, paid a personal visit to the works and went into the treatment very thoroughly, and for a time it was thought the difficulty was solved, but, unfortunately, the same results could not be obtained afterwards when treating the month's output as with the trial parcels. Experts in London are still working on the material, of which 30 tons were forwarded recently for experimental and bulk trials. In the current year the policy to be pursued is to vigorously push development-work in order to add to the ore-reserves, if possible, as the operations of recent years have diminished the reserves very considerably.

A general summary of the aggregate working-cost, yield (including proceeds of concentrates sold), and the resulting profit in milling 59,100 tons, cyaniding 38,410 tons, and the sale of 886·9 tons of concentrates, is as follows: Total working-cost, £52,916 15s. 10d. = 17s. 10·891d. per ton milled; profit, £48,987 19s. 5d. = 16s. 6·936d. per ton milled; yield, £101,904 15s. 3d. = £1 14s. 5·827d. per ton milled.

Keep-it-Dark (owners, Keep-it-Dark Quartz-mining Company (Limited); Benjamin Sutherland, mine-manager).—With regard to mining and the varied developments directly connected with the extraction of ore, development and general equipment continue to maintain their former standard. On Nos. 4 and 5 levels the lode has been exhausted and properly filled in to the upper levels. Output for milling purposes was chiefly mined from No. 6, where two blocks of ore occur, with a combined length of 270 ft.; also on the same level a third or branch block has been driven on for a distance of 180 ft. At a depth of 1,000 ft. from the brace the main lode was intersected on No. 7 level at a driven distance of 347 ft. from the shaft, and the necessary connections effected for ventilation and the passing of ore between Nos. 7 and 6 levels, and No. 6 and the western branch of No. 5. Hence direct communication is maintained throughout the whole series of workings. In raising between Nos. 6 and 5 levels ventilation was very efficiently induced by means of a small fan, ingeniously driven by water-power under a head-pressure of 300 ft.; the installation of which reflected credit on the part of the management. Referring to my remarks in previous report in reference to the altered conditions in strike and underlie on No. 6 level, further development on No. 7 has proved the pitch of the lode to maintain an almost