

of lead refining on a commercial scale and manufacture of lead in British Columbia; the establishment of concentrating plants at Rossland; the more general adoption of the leasing system; and, lastly, the arrangements carried out by companies operating in both the quartz and placer mining districts, by which interests have been consolidated with the view to greater efficiency and economy of working.

As the present issue of the *MINING RECORD* is chiefly occupied with reports from our correspondents wherein the work of the year is reviewed in detail we shall here content ourselves with the briefest recapitulation. Considering first mining in the Coast districts, the situation may be said to show some improvement although there they have been untoward features, such for example, as the closing of the Crofton smelter and the suspension of operations at one or more properties in Mount Sicker district. This, however, is more than offset by the exceptionally good showing made by the Tyee Copper Company and the successful development of a new copper prospect at Ladysmith in this section. On the West Coast of Vancouver Island mining development has been more actively carried on than for some years past, and, according to our advices, in some cases results have been decidedly promising. On Texada Island development work was continued until quite recently at the Copper Queen and Cornell mines, while steady production has been maintained by the Marble Bay, which has been operated at a considerable profit. Perhaps, however, the most important incident in connection with Coast mining is the preparations that have been in progress for extensive operations at the Britannia mine where since the summer the work of installing machinery and plant has been under way. It is expected, meanwhile, that the mine will be ready to commence heavy production by April or May next. The Vancouver Island collieries have been more or less steadily worked during the year, though operations at Nanaimo were restricted by the destruction of the head-works by fire last summer. Preparations are now being made to work the recently re-opened Departure Bay mines on an extensive scale with the expectation of maintaining a daily output of 2,000 tons. Production returns will probably show a decrease in the 1904 coal output.

Reports from the northern placer districts have been generally favourable, the gold yield from Atlin having, according to apparently reliable authority, materially increased this year. The outlook for successful gold dredging in the district is distinctly bright, the work done during the season having been sufficient to demonstrate the suitability and advantages of this method of mining as applied to conditions in the Atlin district, where scarcity of water and the high costs of labour constitute the principal difficulties to successful mining endeavour. The season, however, this year was a fairly long one, and nearly all the hydraulic companies did well. More attention was also directed to quartz development and some promising new discoveries are reported. In Cassiar operations

were chiefly confined to the equipment of two hydraulic mines, while little beyond assessment work was done in the Omineca district.

Some mining has been carried on at points on the Fraser river, a stamp-mill having been installed at Siwash creek, near Yale, where a promising occurrence of free-milling quartz is being developed. At Lillooet a powerful steel dredge was launched in the early summer, and dredging operations have been since conducted with some measure of success. Satisfactory returns were also obtained from a dredge working on the Fraser near Lytton.

The considerable precipitation in the winter of 1903-04 justified the belief that this season at least an adequate water supply might be depended on for mining purposes in the Cariboo district. Weather conditions subsequently, however, were far from favourable, and the summer being an exceptionally dry one, only sufficient water was available to continue working at the principal hydraulic mine at Bullion for eighty-eight days, during which period a recovery valued at between eighty and ninety thousand dollars was realised, sufficient only to defray operating costs. To render the company independent of weather conditions in the future a further expenditure of half a million dollars is required for the extension of the present water system. A number of the smaller hydraulic mines at Barkerville, Keithley creek and other sections have distributed profits during the year, and a slight increase of yield from the district is anticipated. At the deep level mines at Slough and Lightning creeks pumping work has been continuously carried on. One of the companies engaged in these operations, the Cariboo Consolidated, was re-constructed during the year, while additional capital will also probably be provided for the Slough creek undertaking, this depending, however, upon a favourable report by an eminent engineer who recently examined the property.

Mining in the Kamloops district has been stimulated of late by the successful operation of the Iron Mask mine, which during the summer was equipped with a concentrator and other plant and has since made regular shipments. On Coal Hill a local syndicate has been engaged in developing a coal prospect, and at Jacko Lake some mineral development has been undertaken. In the Nicola district much attention has been directed to coal exploration work, boring having been carried on in several directions by the C. P. R. and other interests. With the exception of the extensive operations at the Nickle Plate mine, Camp Hedley, no new developments of importance are reported to have taken place in the Similkameen during the year. There is also little to remark in connection with mining progress in the Revelstoke district.

More capital has perhaps been invested this year in the Lardeau in the acquisition and development of mineral claims than in any other district of the province, with the possible exception of the "high-grade" section of the Boundary. The results of operations have been generally satisfactory, production costs having been considerably reduced, while it is now af-