

always upon the most operative. The first check which Rossland received was due to the melancholy conviction that its productive mining area was very limited. How far that conviction may be justified by eventual development it is impossible to say. But certainly, had shoots of pay ore been discovered in many of the really enormous ledges round Rossland, it would have been a very remarkable gold and copper camp. It was not to be, however, and Rossland's first and severe check came from the realization that it was not to be. The second check to Rossland's prosperity came from ruthless stock speculation which left investors as cold and cynical as to any good things in it, as they had previously been enthusiastic that everything was good. This wave of speculation led to the burdening of the mines with excessive capital, and that led to reckless mining in the hope of profit, and that led the mines into debt and difficulty of all kinds. Then came labour troubles which paralyzed the efforts put forward towards recuperation by the sound concerns. But probably the most insidiously operative cause of all Rossland's troubles was that the opinion was gaining ground that average values were not maintained with depth and that the mines had nothing to look forward to save diminishing profits and eventual abandonment. Every other cause of difficulty would in the course of time work itself out. But the failure of the rock to carry metal in payable quantities struck at the very roots of Rossland's existence. Some very hopeful circumstances are now visible which require that an unduly pessimistic attitude as to the profit earning capacity of the Rossland mines should be abandoned. Three of the big mines of Rossland have had a successful year. The Centre Star mine during its past financial year earned a net profit of \$265,000 out of 88,387 tons of ore, or \$3 per ton, which paid off the debt on the property and left a balance to the good of \$70,000. The Le Roi and Le Roi No. 2 have also had a successful year, if success is measured by the capabilities of the properties and not by the grotesque amount of capital upon which they were expected to pay dividends. For a few months of last year the Le Roi appeared to make losses. But those losses were more apparent than real. They were due to a large expenditure upon development for which it now appears the shareholders are to be fully reimbursed. Under its original American management the Le Roi mine was worked for immediate profits and only ore that paid well was sent to the smelter. After it became the property of the present company, the attempt was made to work the vein without any selection at all, because only the enormous gross tonnage thus produced could justify the capital placed upon, we cannot say invested in the mine. After this plan of extracting dividends from country rock was abandoned, the mine has proved itself capable of producing a large tonnage of ore at a profit over all. But the uncomfortable fear remained that all the time this was becoming more difficult and that as the mine went deeper the ore bodies were becoming lower grade. Even upon actual returns of a satisfactory nature this fear remained like a black cloud upon the mine's horizon. So far as returns go the Le Roi No. 2 has pos-

sibly had the best year of the three mines whose reports are published. It has made £15,471 upon 17,550 tons of ore, a rate of profit which is exceedingly satisfactory, and out of which a crumb has been thrown to the hitherto unfortunate shareholders. The first feature about Rossland then which increases confidence in the camp is the satisfactory position of three of the most important companies there. The second feature is that the milling problem appears to be in course of successful solution. The Le Roi No. 2 and the Centre Star companies are both convinced that they have adapted the cost of production to meet a range of lower grade ores. If they have they have widened Rossland's productive area, lengthened its life, and greatly enhanced the value of their own properties. Upon the assurances of the directors of both companies that their experiments in the direction of concentration have been completely successful, we may take it for granted that one of the greatest obstacles to Rossland's prosperity has been overcome. Equally important is the matter to which special attention has been drawn during the last month or so, namely, the discovery of rich ore in the 1350-foot level of the Le Roi mine. Upon the extent to which this affects the prospects of the Le Roi mine itself is, of course, too early to speculate. But it may be taken even now as evidence that there is no progressive diminution in the value of the ore as depth is attained, but simply a variation in the value of the ore in the different strata of the ore body with which distance for the surface of Red Mountain has nothing whatever to do. We have never been able to understand why mere distance from an arbitrary surface should have any effect one way or the other upon the grade of ore. Grade changes for reasons science has never penetrated. Some mines grow poorer, some grow richer as depth is attained. But we are quite positive that if it were possible to mine up into the air, as well as down into the ground, precisely the same phenomenon would be visible. This, of course, does not affect an accumulation of gold through surface oxidation and subsequent detrition in the gossan of a vein, nor does it affect the existence of ore or its non-existence in an overlying formation. But there is no reason why a sulphide ore occurring in a uniform formation should be any richer or any poorer upon the 1000-foot level of a mine than it was on the surface simply because it is the 1000-foot level and not the surface. The converse is equally true. This discovery of rich ore in the deep levels of the Le Roi must certainly, however, increase confidence in the Rossland camp and may lead to a more vigorous prospecting of mines whose surface croppings happen to approximate more closely to some of the barren levels of the Le Roi than they do to the ore found near the surface in that mine. There can be no doubt that the outlook for Rossland has undergone a wonderful and cheering change during the last six months, a change which will have its effects in increasing confidence in the mining industry all through British Columbia.

The gross production of coal from the collieries of the Crow's Nest Pass Coal Company, in the Crow's