

pendent on a ratification by the shareholders of the Le Roi Company at the annual general meeting which will be held shortly in London, for no opposition is to be anticipated from the Canadian interests. The dismissal (for it amounts to that) of Mr. A. J. McMillan, the company's managing director, meanwhile implies that Mr. Waterlow has been able to convince his colleagues, including the chairman, Sir Henry Tyler, that his view of the situation is the correct one, while that of Mr. McMillan is at least prejudiced. We observe that some of the London financial papers have expressed sympathy with the late managing-director, and suggest that he has been badly used, and, more especially, as "since he took charge of the property its prospects have improved enormously." That may or may not be true, but in a mine such as the Le Roi it is not a very difficult matter to effect, by the process known as gutting to show temporarily any sort of exceptional result; moreover, some of the credit that Mr. McMillan may claim may very possibly rightly belong to the late manager, Mr. S. F. Parrish, who did a great deal more for the Le Roi than he was ever thanked for. But this is all beside the point. As we understand it the directors realize, what is undoubtedly true, that handicapped as it now is with an excessive capital, a white elephant of a smelter, and other legacies of erstwhile unwise counsels, the Le Roi cannot be placed upon an adequate profit-earning footing. It is, therefore, evident that a radical change in policy is requisite, and the amalgamation scheme appears to the majority to offer the best possible way out of the wood. Mr. McMillan has a perfect right to object if he considers it his duty to do so, and we confess, that unless his colleagues had very grave reasons for distrusting his honesty of purpose, his ejection savours somewhat of high-handedness, and the action of the Board, except upon these premises, would not have been politic. If Mr. McMillan's opposition originates from a conscientious scruple as to the advantages that will accrue to Le Roi shareholders from a consolidation of interests as proposed, even if his judgment be at fault, one is forced to admire the principle on which he has taken so firm a stand, but there are certain matters in connection with his present attitude that require to be cleared up before his entire disinterestedness can be admitted.

ELECTRIC SMELTING OF IRON.

Elsewhere will be found a communication from a correspondent anent the newspaper booming of electric processes for steel making. In this connection, as confirmatory of our correspondent's views, we call attention to a recent paper by Mr. R. S. Hutton, appearing in the Proceedings of the Society of Chemical Industry.

Mr. Hutton presented this paper before the Manchester section of the Society, and in it he shows very clearly that the costs of electric power generation for electric lighting and traction purposes are so very different in character from the

costs of the fluid when needed for electric smelting, that no definite conclusions may be drawn from figures given by lighting or traction companies, and chiefly by reason of the very intermittent character of the load, instancing that the average power station is fortunate to get a 15 per cent. load factor, whereas chemical works, using electricity for the manufacture of chemicals, have a nearly constant load factor of 100 per cent. The figures of \$30.00 to \$40.00 per horse-power year, are given by Mr. Hutton with the prophecy that with producer gas such figures might be reduced to \$20.00 a year. The corresponding figures for power delivered by the corporations at Niagara vary from \$17.00 to \$21.00 per horse-power year. Mr. Hutton goes on to say there does not appear to be any immediate probability that electrical methods will be used for the reduction of metallic iron from its ores, and that the application of the electric furnace to the metallurgy of iron is largely founded on the experience gained in the manufacture of calcium carbide, designating the few small scale experiments as of more historical than technical interest. Again, Mr. Hutton makes mention of the fact that even the carbide furnaces have produced chiefly rich ferro alloys, such as ferro chromium and ferro silicon, which are exceedingly high-priced and are chiefly of service to portions of the steel industry. Mr. Hutton's opinion is that "direct competition with the blast furnace is obviously out of the question so far as all present iron-producing countries are concerned." Mr. Hutton furthermore lays stress upon the possibility of replacing about two-thirds of the present fuel used in the production of pig-iron by electric heating; as only about 33 1-3 per cent. of the coke charged is necessary for the chemical reduction of the ore, the balance is employed in producing and maintaining the requisite temperature, and it is for the maintenance of this temperature that Mr. Hutton suggests the utilization of electricity. As to the possible advantages of producing steel by electric methods the matter still remains to be examined on its own merits, and apart from any connection with ordinary processes. From the report of the Canadian Commission it was long since clear that all the operations of smelting and refining can be successfully accomplished by electricity, but it was also made sufficiently clear that wherever coal was cheap it was quite certain that much of the heating could be more economically done by the combustion of fuel than by the application of the electric arc.

VALUE OF TOPOGRAPHICAL MAPS IN GEOLOGICAL FIELD WORK.

Dr. R. A. Daly, in an introductory note to his report on the "Geology of the Western part of the International Boundary (49th Parallel)," fully endorses the argument we advanced in a recent issue on the advantage and economy of having topographic maps of a locality prepared before it is