

after the elevation of the land had made some progress. The action of frost, the flow of water, and the force of gravity, were ample causes for the transportation of ore from the higher to the lower level. This is a common occurrence in hilly countries, but is not often taken into consideration in this land of deep drift, where the finding of a vein so near the surface is a very unusual event. This problem is given as a sample of one of the simplest we have, but difficult only because we seldom expect it. However, there are in some of the eastern districts deposits of glacial debris modified by post-Glacial influences to a far less extent than in the above case, owing to the land being level, the surface deep, and brooks or lakes absent.

These few examples show the great variety of problems facing the prospector in Nova Scotia. Not only must he be a man of unlimited resource and skill in the manual work necessary, where money is doled out

so sparingly as here, but he must be an adept in the solving of riddles in structural and Glacial geology. With a proper training on lines indicated in the foregoing article, I believe we would hear of fewer failures in prospecting. A revival of gold mining in Nova Scotia should result from the finding of some of our long-hidden bonanzas, without reference to present known values. A prospectors' handbook, shorn of all technical terms, and worded in the phraseology of the mucker, should find a ready sale here. Its use is indispensable to the modern prospector in deep surface, yet I do not know that such a special work as this has ever been published.

I shall close with the hope that the foregoing suggestions and examples may be of use to some one, who, like myself, has had to spend time and labour on the solving without instruction of the numerous problems facing the prospector.

OUR EUROPEAN LETTER

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South African mines a drug on the London market—Reasons Discussed — Reports of important properties — Tin and copper mining — Northern Nigeria and its tin pressing forward — Revival of Russian mining — An echo of the Whitaker Wright smash—British coal masters and thin seam mining.

(Exclusive correspondence to CANADIAN MINING JOURNAL.)

London, May 19th, 1911.

South African mining companies on the London and provincial Stock Exchanges continue to be so negligible that the monthly statements of the gold output and labour situation have very little influence. Certainly very good returns are almost without effect upon the market, though possibly if very bad ones came there would be an appreciable decline owing to the lack of support. The gold output for April shows a decrease compared with March of 8,351 ounces, but this is considered satisfactory seeing that March contained one working day more. It is pointed out, too, that the return represents a value of \$1,033,660 in excess of that of April last year, and is a "record" for a 30-day month. The average daily yield for April from the Witwatersrand mines alone, 21,280 ounces, shows an increase on March of 337 ounces. The number of natives employed by mining companies forming the Witwatersrand Native Labour Association is higher now than ever before, and at 213,111 shows an increase of 11,000 on the month. This is the more satisfactory, having regard to the expected growing efficiency of the raw "boys" recruited during the past three or four months. In April last year the total number of natives employed was 206,680, and since then the figure has been below 195,000. The Rand, therefore, has not missed the Chinese coolies.

Many theories are propounded for the absence of public interest. It has been attributed to the operations of the "shops" who are accused of artificially raising or depressing shares under their control as it suited their books; to the surfeit of gambling in rubber and oil shares; to the Wernher-Beit Rand Mines "deal"; to what was thought to be the unfriendly attitude of the Union of South Africa Government in bringing forward adverse legislation; and to a condition of labour shortage resulting in higher working

costs and smaller returns. With respect to the last-mentioned factor, a private telegram was received from Johannesburg on April 21st stating that at the monthly meeting of the Transvaal Chamber of Mines the president expressed the opinion that by October 1st next there would be very few if any less natives employed on the mines than to-day.

The sixteenth annual report of the Rand Mines Limited, a very important and bulky document, includes a full report of the annual meeting held in March last. At this the remarks of R. W. Schumacher were of unusual interest. In view of the last labour returns, showing the employment of a larger number of "boys" on the Rand than ever before, it seems strange to read the Rand Mines' chairman's statements that scarcity of native labour does exist, and is the one serious cloud on the horizon. The natives now being recruited are, he says, of inferior physique and, at all events, for the first few months, are not very efficient workers, while a great drawback has been the exceedingly high death-rate among them. It is probable, too, that with the increase of development work more labourers than formerly are wanted. The remedy in the opinion of Mr. Schumacher, is to train more white men for using machine drills. The great progress made in mining by the more extended use of machine drills, the electrification of mine plants, improved methods of handling ore, and the better accommodation of white and coloured employees, was opening up, he said, a new era in mining. A matter which created great interest in London, and for a time was a depressing market factor, was the purchase of shares from the Wernher-Beit group. In defence of this the chairman pointed out that it is good policy for the Rand Mines to acquire such important interests and thereby extend the scope of their operations. The nine companies in which it is proposed that the Rand Mines should acquire interests are all mines with large areas, and of these the eight companies already milling have a grade above the average of the fields. The chairman's speech treated the whole subject of Rand mining most comprehensively, and a perusal of it would repay those interested.

The Barnato group of seven important Rand companies has just issued reports which compare unfavourably on the whole with 1909. Two concerns show