

great danger to the crew working her. This dredge commenced operations in 1904, but began to break down at the start. The winch was one of the first pieces of machinery to give out, it being incapable of pulling the dredge ahead or raising the ladder. This was replaced, and operations were commenced on a neighbouring bar, but owing to the continual breakdowns and the returns not being sufficient to keep her going, it was deemed advisable to shift her 10 miles down river, with the object of prospecting another claim. This was a risky undertaking, owing to the lack of freeboard, and many accidents occurred on this perilous voyage; the ladder and stacks were both lost, and the dredge all but swamped on several occasions. She, however, eventually reached her destination after magnificent handling. Repairs were then carried out, and the dredge prospected and located good payable ground before being put out of commission.

Another dredge, put on by the Iowa & Lillooet Dredging Company in 1903 at Lillooet, was altogether a better dredge, although considerable trouble occurred at the start. After several improvements had been carried out, this dredge met with, and is now working with, every success.

Dredge No. 4 is a New Zealand dredge; has, in fact, worked there, when it was bought by a small party of New Zealanders, and has been recently re-erected at Yale. This is a powerful dredge, and is without doubt the best that has been put on the river, although as yet possessing no stacker. If this company fails, it will not be the fault of the dredge, although they will doubtless have some pointers to learn with regard to the river.

There is yet another dredge about to be placed on Big Bar, about 30 miles above Lillooet. A company has been floated; plans have been obtained from New Zealand, and are being revised to suit the river by men who were originally brought over by the Fraser River Gold Dredging Company. I am satisfied that this is the correct method of bringing the business to a successful issue, and I confidently expect great things of this company.

Now as to the river itself. It generally has a varying current up to 15 knots. It is a river that is continually rising and falling, and is seldom stationary for any lengthy period. It usually attains its highest point in June, and its lowest in March. The rise and fall in the year varies from 25 to 50 ft. When at its highest there is considerable drift wood, and in winter at times heavy-running ice and "mush" ice—the latter being very difficult to contend with as it apparently rises from the bottom of the river; but this is only felt when dredging in the current. It is possible to dredge nearly all the year round. The ground is in most places very heavy, and is very difficult to break through. It consists mostly of large boulders and gravel, and is easy to treat. The gold is fine and flaky, and is easily saved.

The chief source of wealth has been found generally in the base, where good gold is obtained at full dredging depth—about 30 ft.

The bed of the river varies considerably in depth, for which reason it is generally impossible to work, and in the future I think operations will be confined exclusively to the bars, which from the present results yield from 10 to 20 cents to the cu. yd. Running expenses should not exceed 5 cents per cu. yd., but this, of course, depends on the capacity of the dredge.

H. G. STRINGER,

Late Manager, Fraser River Gold Dredging Company.  
London, W., October 15, 1906.

#### VISIT OF DIRECTOR OF GEOLOGICAL SURVEY TO BRITISH COLUMBIA.

MR. A. P. LOW, Director of the Geological Survey of Canada, appears to have been favourably impressed with the capabilities of British Columbia as a mineral Province, notwithstanding that his visit to this Province last summer was too short to admit of his giving more than a few of the larger mining properties the time and attention necessary to a full knowledge and appreciation of the extent of development done in them and their value from a producing standpoint. Nevertheless he saw sufficient to convince him that the mining and smelting industries of British Columbia are on a substantial basis, are steadily growing in importance and are giving much promise of permanent and profitable operation. Further, the director's "flying visit," as it has been called, revealed to him the wide extent of mineral bearing country awaiting development, and its great need of all the assistance the Geological Survey can give it to aid in making known its geology and mineralogy, so as to encourage the employment of capital in the extensive utilization of its vast mineral resources. After Mr. Low's return to Ottawa there was printed some information giving a summary of his trip. From this the following notes have been abstracted:

Mr. Low first visited the coal mines of Crow's Nest Pass, East Kootenay. He found that at Fernie and Michel a large output of coal and coke is being made from the mines and ovens, which are not only operated to their full present capacity, but new workings are being opened to increase the output, for which a ready market is found, both in Canada and adjoining portions of the United States.

At Rossland and in its vicinity a distinct revival of mining has taken place, owing to new discoveries of richer ore in the deeper parts of the principal mines, discoveries which Mr. R. W. Brock, acting for the Survey, had predicted with considerable confidence. The work of Mr. Brock and of his confreres is much appreciated in the district, more especially owing to the renewed confidence it has imparted both to mine managers and prospectors.

At Trail, extensive alterations and additions were being made to the smelter, and similar improvements were taking place in Nelson, Grand Forks, Greenwood and Boundary Falls, showing that the output of the mines supplying these furnaces is of such a nature as demands more extensive plants for its treatment.