

### Classifying Tailings Before Concentration.

Messrs. W. Bettel and J. H. Johns have been carrying on at the Ferreira mill some novel experiments on behalf of the Chamber of Mines, Johannesburg. It was believed that better results could be got by classifying the pulp previous to concentration, but the anticipations were not realized. The experiments were in the direction of roughly classifying, by means of spitzluten and spitzkasten, and of passing that pulp alone which came from the spitzluten over the vanners. It was found that under these conditions the vanners have not caught their usual percentage of metal.

The explanation offered may be thus summarised: 1. Overloading. 2. To a principle which has hitherto not been recognized on these fields, but is well-known on the diamond-fields, that minute particles of high specific gravity will subside through a shallower layer of pulp suspended by agitation in a fluid medium (such as a mixture of coarse and fine sand, pyrites and clay) more readily than through a classified pulp, consisting of coarse particles suspended in clear water. This may be explained by assuming a reduction of surface tension in the former case. 3. The proportion of fine gold escaping in sands and slimes is increased when an excess of water (over normal) is present in the pulp. 4. With spitzluten, an increased clear water supply carries off fine gold and floured amalgam in considerable amounts in slime pulp. 5. The scouring action of the coarse sands, etc., from the spitzluten (free from slimes) prevents the collection of floured amalgam on the shaking amalgamated plates on the vanners, and this amalgam so lost is not wholly recovered in the concentrates collected.

The pulp (consisting of slime and finest sands) delivered by the spitzkasten is imperfectly concentrated on the third vanner, such pulp requiring a large area equal to a very shallow layer of liquid for efficient concentration. The finest slimes (solid matter in effluent from spitzkasten) are very rich in gold; this is attributed to the presence of suspended floured amalgam and free gold of extreme tenacity, probably coated with films of grease or sulphides, which cause the particles to exert an increased surface tension, sufficient to overcome the action of gravity to a very considerable extent.

The results obtained are, however, extremely interesting, and may, under other circumstances, have a distinct commercial value. When Frue vanners are used for concentration, previous classification, in the opinion of the experimenters, would not be advantageous, but where any other concentrator, not having a vanning motion, is employed, they would recommend a previous classification of the battery pulp.

### COMPANIES.

**Goldfields of British Columbia, Ltd.**—The first ordinary or statutory meeting of the above company was held on 2nd inst., at London, Eng., under the presidency of the Right Hon. the Earl of Essex, chairman of the company. The Secretary, Mr. F. Callow Hole, read the notice convening the meeting. The Chairman said: As a rule a statutory meeting was merely a formal affair, but to-day he was in a somewhat different position, and was able to depart from the usual plan. A certain amount of work had been done, and there was reasonable expectation of paying substantial dividends before very long. (Hear hear.) The company was floated with a nominal capital of £600,000, of which the vendor agreed to take £40,000 in cash, and £360,000 in fully-paid shares. The directors, however, managed to reduce the cash payment from £40,000 to £25,000, the vendors taking the balance of £375,000 in fully-paid shares. The prospectus of the company was issued in March, at a time when the markets were very stagnant, and a depression was going on all round. In spite of that, however, they had a fairly satisfactory answer to their appeal, with the gratifying result that their list of shareholders now showed a large number of influential names. Since they went to allotment the directors had turned their attention to the proper transfer of the various and valuable properties which they had acquired, and the shareholders would readily understand that in order to comply with the Company Laws in British Columbia, there was necessarily a certain amount of delay in getting them transferred. All that had now been satisfactorily accomplished, and he thought that everything was now on the high road to success. Although the company had only been in existence for about four months, it had already given birth to a strong, healthy, and he might say, a good-looking child. (Laughter.) He did not know if they had ever discerned it, but the laws of nature were somewhat different from the laws of companies. Whereas, in nature children are entirely dependent for their welfare and well being on their parents, companies such as theirs were dependent not only for their welfare but for their very existence on the state of health of their children. The name of this promising child was called the Waverley Mine. It had been successfully floated, and the directors of the Goldfields of British Columbia were so satisfied as to the worth and wealth of that mine, that they had agreed to take merely a nominal sum as purchase consideration, just to pay the various expenses, such as the flotation of the company and the expenses incidental to bringing it out, and to take the remainder of the purchase consideration in fully paid-up shares. They had probably all seen the prospectus of the Waverley company, and if they would examine that closely they had every hope that the amount of ore there would average about 20 lbs. per ton. They would be, however, quite satisfied if it were only 10 or 15 lbs. per ton. The directors had been very fortunate in securing the services of Mr. John Grant, who was to depart for British Columbia to-morrow, when he would turn his attention to making this Waverley mine as profitable as possible, and he hoped before the winter to make some valuable shipments over to this side. The directors of the Goldfields of British Columbia looked upon the Waverley as a most valuable asset, and they felt certain that as soon as the shares became known on the market they estimated that the company would make a profit of about £40,000, which would be ample to pay a very substantial dividend on the issued capital. He then called their attention to two reports. One was an extract from the *Rossland Miner*, dated June 12, 1897: "Good show of quartz and pyrrhotite on Jumbo Hill. Things are looking well at the Flossie L. This

is one of the claims in bond to Grant Govan's London Co., Two tunnels are being driven, one on the ledge of the west side of the west block of little Sheep Creek, the other diagonally across the Jumbo Co's vein which comes down Jumbo Hill. Both tunnels are now about 150 ft. In the tunnel running to Jumbo Hill there has just been opened a fine body of quartz and solid pyrrhotite. Its extent cannot be definitely determined. Tunnel at this point has not made a depth of over 60 feet, but a little further on the hill rises rapidly, and depth will be made very quickly. The ore body found lies on the left, a good smooth wall appears on the side, and all the indications are favorable for a large ore chute. The tunnel is running thence into a mundie dyke, which runs down the west side of Jumbo Hill. This is the dyke which cuts off upright on the Rossland Camp. It is about 125 feet from the face of the tunnel to the line of contact, and it is reasonable to suppose a good ore body will be found somewhere in the mine now being opened up." Another telegram which comes from Reuter, dated from Revelstoke, June 29: "A train of eight cars loaded with copper bullion and matte from the Hall mines left here yesterday for Montreal for shipment to England. This is the first consignment from British Columbia. It is rich in silver and gold, the value being about \$500 per ton." He thought they would agree with him that these were very satisfactory reports. Referring to the future of the company, he was pleased to tell them that Mr. Grant Govan had consented to go out to British Columbia and act as managing director. He had already left for the scene of action, and he asked the chairman to tell them how sorry he was not to have been at the meeting, but Mr. Govan thought, in the interest of the Goldfields of British Columbia, that the sooner he got out there the better. It was mainly to Mr. Govan's ability and untiring energy that the successful operation to which he had alluded had been completed, and it was mainly owing to him that the parent company had been formed at all, and when he told the shareholders that Mr. Govan had a very large stake in the company they would be perfectly certain that he would do his utmost to ensure a successful future. Besides Mr. Govan they had three names that appeared in the prospectus of the Gold Fields, which he felt sure would carry great weight, viz.: The Hon. David W. Higgins (Speaker of the Legislative Assembly of British Columbia); David R. Ker (President of the British Columbia Board of Trade, Victoria); and the Hon. Chas. E. Pooley, Q.C. (President of the Executive Council of British Columbia). He thought that these three gentlemen would be absolutely invaluable to the Board. Owing to the mountainous and heavily timbered state of the country, the work of prospecting had been very difficult, but now that the place has been opened up by railways and other means, that difficulty has been somewhat abated, and prospecting is being carried on with vigor. The result is that the LeRoi mine has been proved, and also the War Eagle, and fresh finds are being continually made, which only require a little proper development and expenditure of capital to make them paying concerns. I will only cite one instance of the remarkable value of the mines out there, and that is in the case of the Lanark mine. The reports came to hand not very long ago, and they show a profit in May of £3,000, a profit in June of £4,000, and hopes are now entertained of the profits amounting to between £5,000 and £7,000 a month. The Lanark mine is situated very near the Waverley. To sum up in one word he thought the company had a great future before them. Everything was in their favor. It was a white man's country and a white man's climate, and although he did not for one moment profess to say that this company was going to make its fortune in a single day, yet he hoped and believed that with a little careful management, and a certain amount of luck which they could not do without, the directors would be able to justify the confidence the shareholders had placed in them, by returning a good and substantial dividend.

**Fraser River Gold Mines, Ltd.**—The first ordinary (statutory) general meeting of this company was held in London, on 6th instant, Mr. John Lowles, M.P., (Chairman of the company) presiding.

The Secretary, Mr. W. A. Stearns, read the notice convening the meeting.

The Chairman said: Gentlemen, this is the statutory meeting of the shareholders, held in accordance with the obligatory clauses in the Companies Acts. It is not usual to make any very lengthy statement, and one does not expect, as a rule, a very large attendance. But perhaps I may be allowed to say that this is the first issue in a double sense of the new goldfields of British Columbia. That is a strong company, which was formed under excellent auspices, and I do not think it has any cause to be ashamed of its first offspring. The property has been transferred, and we have in charge one whom we think to be a most capable, responsible and expert engineer, in Mr. W. F. Gore, of Vancouver, from whom we have recently received information with regard to this property. I ought, perhaps, to say that we have two classes of property. We have, in the first place, ten miles of the Fraser river. We are advised that this is the best ten miles of the Fraser river, both for working purposes and for its gold contents. And then we have two placer properties at no great distance from it, which will be worked under the same management. Before we took the property up—I am speaking now of the New Goldfields—we had the advantage of the advice of Mr. Cox, of Messrs. Bainbridge, Seymour & Co., who had himself just returned from the locality. He confirmed the very high opinion, based not merely on his own experience of British Columbia, but also from his experience at the Antipodes, of the capacity for profitable dredging on the Fraser river. We received this telegram on June 4th from Mr. Gore, with regard to the machinery: "Expect to receive all the machinery within the next seven weeks. Dredge will begin to work about the middle of September." On June 18th we had this cable: "Machinery will soon be completed; everything going on most satisfactorily." With regard to the two placer properties of which I have spoken to you, we received this cable dated June 23rd: "Subject to your approval, shall commence work at once on either one or the other hydraulic mining property." So that the happy position we want to get at as quickly as possible—of winning the gold, and being able to store some of it to our credit at the bank—will, we hope, be an accomplished fact before very long.