

assayer on the spot, and many appointments are open to well-qualified young men in that direction. A certificate from the Government would be an assurance that the holder of it was competent to perform ordinary assays.

The examiners are Mr. Carmichael, the provincial assayer and analyst, who has high certificates of competency from Owens College, which is one of the best scientific colleges in the world, and Mr. Pellet-Harvey, of Vancouver, who had the best of training in assaying in Swansea, who also holds certificates of competency and is a man of great experience.

We believe that the Hon. Colonel Baker contemplates instituting a course of instruction in assaying during the winter, to be followed by an examination and the granting of honor certificates, as well as ordinary certificates, to the successful candidates, and that he has already had numerous applications to join the course of instruction. Fees will, of course, be charged and applied to the general revenue.

Coal assays are a specialty and require appliances which are not always available. Some of the leading assayers in London will not undertake an exhaustive analysis of coal, but refer the applicant to specialists in that branch of assaying.—*The Colonist*.

### Dredging.

The following is taken from a prospectus sent us by the Dominion Gold Dredging and Placer Mining Company (Limited), which is now carrying on operations on the Fraser River:

A Charter of Incorporation has just been obtained from the Dominion Government for a company known as The Dominion Gold Dredging and Placer Mining Company, and formed for the purpose of raising sufficient capital to build, construct and maintain all plant and machinery necessary to work on the rivers of British Columbia and elsewhere, to take the gold out of the beds of the rivers, where it is known to exist in large, rich quantities, having been washed down from the mountains. The Chinamen and Indians are making thousands of dollars every year, washing the sands from the shores of those rivers after the freshets; some idea may be had, therefore, of the wealth that lies under the rivers themselves. The difficulty in working these rivers has been in getting machinery sufficiently powerful to take the sand and other deposits from the beds of the rivers. Several companies have been formed, and have put on heavy sand pumps to lift the deposits, yet none so far have been successful in doing the work.

James Amess, of the city of Toronto, architect, having spent considerable time in British Columbia, and having had practical experience and knowledge of the difficulty, hit upon the idea of a mechanical device known as the Cable Dredge. He tested this on the Thompson River in September, 1894. The experimental dredge proved successful; taking up from the bed of the river the gravel deposits with a paying quantity of gold at each test.

There is no doubt in the minds of any who have visited British Columbia as to the rich deposits of gold in those rivers.

Mr. Turner, Finance Minister of British Columbia, in conversation with a *Montreal Gazette* reporter, in the month of May, 1893, said that the Chinamen were making thousands of dollars by washing the sands of the rivers in the Cariboo district, and the Indians also reaped part of this harvest of gold by washing the deposits along the shores of the Fraser and Thompson Rivers, after the freshets. A recently formed company, known as the Horse Fly Hydraulic Company, located on the Horse Fly River, on November 15th, 1894. The sluice boxes yielded them \$13,000 as the result of two weeks' work. Mr. Hobson, the manager of this company, gives a very satisfactory account of the mineral riches of this country and the prospects ahead. With respect to the richness of this region in gold, Mr. Hobson states that all the river gravel deposits are very extensive, and of much higher grade in their gold tenure than those of California. Sample lots have been washed, and give results varying from one to five dollars per cubic yard.

This testimony is of especial value, he being fully qualified to judge, having spent twenty years gold mining in California.

Those who have taken hold of this project are practical, business and mechanical men, who not only understand the nature of the work to be done, but have practical experience in mechanical work. Giving, as they have done, their time, energy and thought to the project, those who invest have the best assurance that the machinery will be admirably adapted to the work that needs to be done. Mr. Amess has already spent a great deal of time and money in developing and perfecting the project. He will personally superintend all the operations in British Columbia, while the financial affairs of the company will be under the

control of a board of directors, who will be in touch with the work as it progresses, and will meet at frequent intervals, so that no benefit may be lost that can be turned to the advantage of the company.

### Copper Mining.

A confident belief prevails throughout British Columbia mining circles that the province is on the eve of a very great development of its varied mineral resources. It is known that a representative of the largest copper interests in South Wales has paid a business visit to the gold and copper bearing fields of West Kootenay, accompanied by one of the most noted metallurgists in the province, who has received for his services an exceptionally large fee. The actual intention of the investigator is naturally kept, as far as possible, undisclosed; but, viewed in connection with the recent rise in the value of copper, caused by the rapid increase in demand for that metal, it is fairly to be assumed that a very considerable investment of British capital is likely to result from the visit, should inquiries on the spot prove as favorable as expected. The assayer in question speaks, it may be added, very confidently of coming large developments in copper melting, which probably point to one object of the visit.

### Prospecting and Mining.

A "distinction and a difference" is made by the Colliery Engineer and Metal Miner, which, in the current issue of that excellent journal in an article on prospecting and mining, says:

"Prospecting" may roughly be defined as looking for precious metal we hope and believe exists, but of whose actual presence we have no positive assurance. "Mining" on the other hand, is when we have actually found ore and are following and developing it. Under this definition there are many kinds of prospecting. There is prospecting for mineral leads with pick and shovel and for placer gold with a gold pan and rocker.

There is prospecting on a bigger scale by diamond drills, such as are now puncturing the mountains above Leadville in search of the gold belt. It is prospecting on a gigantic scale when a company, like one at work at Idaho Springs, drives a tunnel for five miles through the mountains in search of veins of gold, some of which they know to exist, and others they hope to find. It is prospecting still when, as in the present case, a company undertakes to work the gold-bearing sands of Clear Creek on a gigantic scale and with gigantic and novel appliances. Instead of the miner's little ditch or sluice, they have constructed a flume a mile or more in length, twelve feet wide and eight feet deep to turn the course of the primeval torrent and carry its water bodily on one side, so as to expose and lay bare an interval of a mile and more of the river bed for their operations. Instead of the miner's little pipe short tom or long tom and dribble of water, the latest invention, Allen's big stave pipe over three feet in diameter is brought to bear and has been laid down for a mile, while attached to it is another mile of black steel sixteen-inch pipe forking at the end to accommodate two giant nozzles with a pressure of 125 vertical head and a force like that of a cannon.

### CORRESPONDENCE.

#### EAST KOOTENAY, B.C.

To the Editor of the MINING RECORD:—

The North Star has been shipping ore to the Everett smelter. The first two car loads averaged \$68 to the ton, gross value; after paying the expenses of mining, shipping, smelting, duty, etc., about one-third of the above should be net profit. When the Crow's Nest Railway is completed, and smelters are erected in East Kootenay, the profits will be greatly increased.

This mine is situated about twenty miles north-west of Fort Steele, and has had a fair amount of development work done on it, consisting of shafts, cross cuts, etc., extending along the lode for about 450 feet.

At the main shaft the lode is now fourteen feet wide, at a depth of seventy feet, and, in many places, it is much wider.

There are several cross cuts at and near the surface, all showing solid galena, and carbonates in large quantities; also much concentrating ore.

The Sullivan group, about two miles north of the North Star, on the same mineral belt, and similar in character of ore, are now