

blow. The machine is very compact and portable, and is adapted for either face working with tripod stand, or with spreader bar for work in mine levels in any position and at any angle. It is claimed for the machine that the tool, which is inexpensive, will save its cost in a few weeks by dispensing with the services of a holder-up and by cleaner and more rapid drilling. At a trial the machine worked well in either sandstone or granite, and seemed adapted for unskilled labour.

The local management of the Hall Mining & Smelting Company in one instance, and several mining and smelting men, also of Nelson, in another, have during the past twelve months brought about changes in conditions affecting the smelters, more particularly those treating silver-lead ores, that tend to reduce the cost of smelting. The opening up in the Boundary district of the Emma mine, the ore from which has a high iron content suitable for fluxing purposes, and as well sufficient values in copper and precious metals to pay a considerable proportion, if not all of the mining and freight charges, has done away with the previously existing necessity for using a barren iron flux. Similarly the development of the Hunter V. mine, in the Ymir district, has provided an ore having a high percentage of lime, also very necessary as a flux, and carrying values in gold and silver that return nearly \$10 per ton above freight and treatment charges, this obviating the necessity for using a barren lime flux. A double benefit is derived from these improved conditions, viz: two mines are being worked at a profit to their owners, and the smelters can obtain fluxes at little or no cost instead of having to pay for quarrying and transporting them.

The enterprise of Mr. P. H. Craven in leasing the O. K. stamp mill, near Rosslund, and in making and carrying out arrangements to treat on a royalty basis the 2,000 to 3,000 tons of ore contained in the second-grade ore dump of the neighbouring I. X. L. mine, is an object lesson that might with advantage be carefully studied elsewhere in the Province. The I. X. L. ore that Mr. Craven is handling successfully and profitably, contains, so we are informed, only about \$4 to the ton in free gold, and the greater part of this is saved on the amalgamating plates. About 25 tons a day were put through the mill during four mill-runs the last three months, with the result that 434 ozs. of gold were recovered. The money value of this gold is not large—\$7,000 to \$7,500—but the value of this example of what may be done where practical experience and pluck are combined, should be considerable. Mr. Craven deserves success, for he recognized an opportunity that few if any others realized was open to them as well as to him. It is gratifying to know that his operations are leaving him a margin of profit, and still more satisfactory to learn that his enterprise has in some measure demonstrated the practicability of turning to good account ore dumps heretofore considered too low grade for profitable treatment.

The returns of the season's operations in the Yukon, which are now practically complete may be regarded as reasonably satisfactory. They certainly do not afford any evidence of an early exhaustion of the alluvial gold deposits of that region, despite the fact that the gold yield is somewhat below the amount recovered in 1902. This decrease is, however, easily accounted for on the score of a drought of six weeks duration during the summer, and a consequent shortage of water at a critical time. As an indication, moreover, of the extent of mining activity on the creeks in the vicinity of Dawson, the output again cannot be considered as affording a trustworthy measure for comparison, for it fails to take into account a great deal of exploitation and development work, the result of which generally is said to be most promising. Although fewer claims are now being worked than was the case at the time of the earlier excitements of '98 and '99, operations are now carried on much more effectively, the payable portion of the gravels on the proved gold-bearing creeks having been accurately determined, with the consequent result that there is less waste of effort. The productive area is meanwhile gradually expanding, while costs are being steadily reduced by the introduction and employment of modern mining appliances and methods.

The prompt punishment by imprisonment of the man Tanghe who sought by a subterfuge to obtain possession of a portion of the Lucky Jack claim at Poplar Creek is a matter for congratulation, although it is only what should be looked for as a matter of right in our mining camps, where justice rather than smartness prevails. The position was a very simple one; a deal of gold quartz, commonly known among prospectors as "float," lay loose in a draw immediately below where the Lucky Jack ledge stood out from the face of the bluff above. From personal knowledge of the position we have no hesitation in expressing the opinion that by no ordinary stretch of imagination could the ground where this quartz lay be properly designated placer ground. The action of the Gold Commissioner, therefore, in ordering the jumper Tanghe to remove his stakes was, in our judgment, an eminently proper one. Equally so was the action of the magistrate, if within his powers, in giving Tanghe three months' imprisonment for his defiance of the Gold Commissioner, and it is well that an example was immediately made of this offender. Swift and sure justice is imperative in a mining camp if the rights of *bona fide* holders of mineral claims are to be maintained. There should be no room for sharks and sharpers in British Columbia mining camps, and the sooner and oftener this truth is brought home to members of that class the better for the camp immediately affected and the mining districts of the Province at large. Further, the only way to secure proper respect being paid to the decisions of the Gold Commissioner is to punish those who refuse to abide by them. That this was done in the Poplar Creek case under notice will have the effect of impressing upon those disposed