

### Amended Yukon Regulations.

The recent changes in the gold mining regulations for the Yukon region, made by the Dominion Government are of some importance. They were made public the 12th instant and will go into effect in the Yukon twenty-four hours after the orders are received by the gold commissioner there. This will probably bring them into force about May 1st or soon later.

The first order is one that has several times been asked for; it provides for a yearly exemption of \$5,000 gross output per claim, before royalty is charged on gold recovered. This will benefit the smaller miners and may stimulate prospecting. At any rate it will be a concession to a general demand which will doubtless be appreciated.

The second order provides that no government officer or other person employed by the government in any capacity shall hereafter be permitted to locate or record claims on mining lands in the Yukon. This will put an end to a practice of which much complaint has been made and which has amounted almost to a public scandal.

### South African Blue Asbestos.

Mr. H. F. Olds read a paper on "Blue Asbestos" before a recent meeting of the English Institution of Mining and Metallurgy. Mr. Olds said:

Blue asbestos is a variety of that mineral found only in South Africa. It occurs in Griqualand West, and is mined over an area of 30,000 acres. It differs from the other varieties of asbestos, such as the Italian, Canadian, or Russian, not only in that it is blue in color, but in being considerably lighter. The asbestos is found in veins, seldom less than 2, or more often 4 to 5 inches wide, formed of closely compacted parallel fibres, which run from wall to wall of the vein without break or fault. The grain is very fine, and even in the rough state the fibres are singularly distinct. Several veins are found, always in regular extent, and the fibre always lies at right angles to the sides of the deposit. The enclosing rock is a dark brown shale. The fibres are somewhat elastic, and easily separable by the fingers. The character of the rock varies considerably; some places are soft and some hard; the better quality asbestos occurs in the hard rock. Its color is a peculiar lavender-blue, and is caused by the large proportion of protoxide of iron it contains. Its composition is given as:

Silica .....	51.1
Protoxide of iron .....	35.8
Soda .....	6.9
Magnesia .....	2.3
Water .....	3.9
	100.0

The present output is over 100 tons per month, and there is apparently unlimited capacity for development and increased turn-out as the demand for it increases. Native labor is employed under European supervision. Very little skilled labor is required, the mining being mostly surface work, or by shallow adits driven in the sides of the hills. The smallness of the cost at which the article is obtained forms a striking feature, being only £5 per ton of 2,000 lbs. It has most of the qualities of white asbestos. It is unflammable, rot-proof, and unaffected by atmospheric influences, and is a non-conducting material. It is stronger than the ordinary asbestos. In "cobbing" it breaks away from the matrix rock with a clean fracture, and without any fragments of the latter adhering. The wool is capable of being spun into very fine yarn, of great tensile strength, which can be woven into netting, twine, ropes and cordage of all kinds. A composition is also made from the blue asbestos for rendering cement and other materials unattackable by acid liquors or vapors.

### Power Transmission for Underground Pumping.

In a paper read before the Association des Ingénieurs de Liège, Mr. Paul Habets comes to the conclusion that underground pumping engines, whether worked by steam, hydraulic power, or electricity, are nearly equivalent as regards the consumption of steam. Methods with gearing are, however, more economical whenever a pumping engine is laid down of greater power than that actually required under ordinary circumstances, in order to provide for an increase in the quantity of water, in which case the pump does not work continuously, and if it be driven directly by a steam engine, its rate of consumption will increase in inverse proportion to the actual time it is at work. The advantage of reduced consumption, with suppression of the disadvantages caused by underground steam pipes, often compensates for the higher first cost of geared pumping engines. Hydraulic transmission has the advantage of great simplicity in the plant and its maintenance. The steam consumption of slow running compression engines, which may be fitted with very perfect valve-gear, may be reduced below 16½ lbs. per horse-power per hour; and with compression engines not consuming more than 14¼ lbs. per indicated horse-power, the consumption by the hydraulic pumping engines will be less than 22 lbs. per h.p. in water raised. Electricity requires motors of high speed, or of moderate speed if the generating dynamo be driven directly, while they are of short stroke and often less perfect as regards their valve-gear; but otherwise the generating dynamo should be driven by belt or rope, which is not, however, so favorable as regards the general useful effect. The management of dynamos would appear to be more delicate than that of hydraulic engines; but, on the other hand, the transmission of current in the cables is more economical than that of hydraulic engines; but, on the other hand, the transmission of current in the cables is more economical than that of water under pressure in the pipes, while cables are more easily laid than rigid pipes. Electricity, therefore, is better suited for long distances, while more readily lending itself to working appliances of all kinds; but the special conditions of each case will decide which means for transmitting power should be adopted.

**LARGE VENTILATING FAN.**—The Capell fan has been selected for the ventilation of the Hoosac tunnel, and is being constructed by an engineer at Pittsburg, who is the licensee for the Capell fan in the United States. The fan will be 16 ft. diameter by 8 ft. wide, with double inlets. The guarantee is for 600,000 cubic ft. of air per minute, which, irrespective of friction, means moving over 20 tons of air per minute, 13 cubic ft. of air weighing, roughly, one pound. The power is to be electric, supplied by the North Adams Electric Co., Mass.

**LEGAL DEFINITION OF MINERAL.**—The English courts have given a very comprehensive definition of the word "mineral." One of the notable cases is that of the Attorney-General v. Tomline (L. R. 5 Ch. Div. 750), in which Lord Justice Fry held that "the word 'mineral' includes every substance which can be got from underneath the surface of the earth for the purpose of profit." In the case of Nisbet Hamilton v. North British Railway Co. (13 Ct. Sess. Cas. 4th series, 454, at page 461), Lord Adam said, "Common earth and sand are minerals."

A CHARTER has been granted to the Mikado Peninsular Gold Mining and Development Company, with a capital stock of \$100,000. The directors are:—Walter Ross, Fred J. Bowman, J. H. Ross, D. T. Ferguson, and T. E. Birbeck.