

In the early part of last year an experiment was made at the 20 fathoms level, where 10 superficial fathoms of ground broken and weighed was found to average 258 cwt. (of 112 lbs. each cwt.,) of three and a half per cent. ore, equal to 1,011 lbs. of copper to the fathom of ground broken. And the ore broken from the 30 fathoms level averages about five per cent. of copper, thus showing a very marked improvement in the quality of the mass as it descends.

In driving the 30 fathoms cross-cut from the shaft, we met with a lenticular course of quartz similar to those referred to in the Geological Report, and obtained from it a little over 50 tons of dressed ore, averaging about 43 per cent. of copper.

#### STOPING.

In stoping this from the back of the level, we found it to thin out as it approached the interstratified bed, and in sinking on the underlay of the bed, between the 20 and 30 fathoms levels, a marked poverty was observable on each side from the point at which the quartz course dropped from it.

In the end driving east on the bed from 30 fathoms level, we met with another lenticular course striking partly on the dip of the bed, and which from its position may be regarded as a continuation or splice of the former. We have followed this on its course for a distance of over 13 fathoms, at a cost of about \$900, and obtained about 12 to 14 tons of ore, estimated worth \$2,500. We are now stoping it along the bottom, where we find it averages from 18 inches to 2 feet wide, and is estimated worth about \$200 per fathom. I may here remark, that, at this point, we have again an instance of the poverty of the bed occurring in the immediate vicinity of a quartz course, and similar to that before referred to as met with in the adit. These facts go far to strengthen the theory suggested by Sir W. E. Logan, "that the quartz courses derive their copper from the interstratified beds;" and I am strongly of opinion that, in the working away of the beds, these rich masses will be frequently met with, and great profit may be expected from them.

In our drivages on the bed we have met occasionally with