nearly S.E. and N.W. In Polgorth one is north and south.

The veinstones of tin lodes are quartz, chlorite, capel (quartz and schorl, or quartz and mica, or quartz, schorl, and chlorite), and rarely schorl, or fluor. The width of tin lodes varies from 36 feet to a mere string; the average being from 1 to 4 feet. The average underlie is about 2 feet in a fathom: extreme cases give 10 feet; or, in contact with copper lodes, 16 feet. Most of the productive tin lodes have been found in a slaty country.

To the *Third Class* belong the *oldest east and west copper lodes*. These form the great majority of the copper lodes of Cornwall. Their veinstone is generally quartz; sometimes fluor, quartz and fluor, capel, chlorite, hornstone and porphyry, or calcedony. The average width is not more than 3 feet.

The direction is mostly south of east, and north of west, about 10° upon an average; sometimes E. and W.; or north of east and south of west. The underlie is various, but generally northwards; in a particular tract mostly southwards; in some cases the same vein changes its underlie from north to south. The average amount of underlie is 2 feet per fathom, the greatest 8. These copper lodes always traverse tin lodes. They are usually accompanied by small veins or partings of clay, called by miners "flukan."

The *Fourth Class* is composed of the *contra* copper lodes*. These are similar to the third class, excepting in their direction, their greater width, and their having more flukan in their composition. The average width may be stated at 4 feet.

Their direction is in general from 30 to 45 degrees south of east and north of west; some, however, run in an opposite direction, namely, north-east and south-west.

Their underlie is much the same as that of the other copper lodes, to which they are much inferior in number.

* Veins which range from 30 to 60 degrees north or south of the east and west points are called CONTRAS.