

The *Fifth Class* includes the “*cross courses* :” these are sometimes composed wholly of quartz, but they usually contain, besides quartz, a large portion of flukan, and sometimes of gossan.

Their width is usually greater than that of the veins previously mentioned, averaging at least 6 feet.

Their direction is usually west of north and east of south, but sometimes north and south, or east of north and west of south.

Their underlie is various : most of those which point east of north, underlie towards the west ; and on the contrary, those which point west of north, underlie towards the east.

Cross courses have been traced for several miles : they rarely yield tin or copper ; lead is the principal metal found in them.

In the *Sixth Class*, the *more recent copper lodes*, which are not numerous, nor in their size, direction, or underlie, materially different from older veins of this metal which have been described. They have more clay in them than is usually seen in the cross courses.

The *Seventh Class* contains the *cross flukans*, or cross courses which are composed wholly of clay ; they are seldom more than one foot wide, but no water passes through them.

Their general direction is nearly north and south ; their underlie is much the same as that of the cross courses, generally towards the east.

In the *Eighth Class* are ranked the *slides*, which are composed wholly of slimy clay, and appear like natural partings in the rock.

They run in all directions, but in general are nearly parallel to the tin and copper lodes, which they throw up or down. They are narrow, and underlie very fast.

It has been observed by Mr. Carne, as a result of the preceding investigations, that “veins which contain the greatest quantity of flukan or clay, are generally found to traverse those which contain a less quan-