

Creek, in Fairfax county, Virginia, six miles west of the Potomac River, and, of course, reported adversely thereon.

Owing to the level character of the country south-south-west from the vicinity of the Cooptown there is little opportunity for discovering outcrops of metals in this part of the range until we reach the neighborhood of the Gunpowder River. Near the point where the north and west branches of this river unite, about twenty miles north of Baltimore, we find, in addition to the magnetic oxide of iron before noticed, both chrome and copper ores.

In that vicinity, on either side of the river, there are several formations of serpentine containing chrome ores. It does not appear to exist in large quantity, and is generally so much mixed up with magnetic oxide of iron as to materially diminish its value and to prevent its being mined to much extent.

Copper ore accompanies, (in very small proportion,) the magnetic oxide of iron, which is associated with steatite in veins in mica-slate rock. A few years since certain parties caused a shaft to be sunk into one of these veins, under the expectation that copper might be obtained in available quantity beneath, but they were disappointed. This was successful at the Springfield mine, in Carroll county, and a similar result might happen at some of theseveral veins near the Gunpowder, but the cost of sinking deep shafts is too great for the chances of a favorable result, as I advised the parties before their abortive attempt was made.

In following this metalliferous range south-westward I have not met with indications of either chrome or copper until we approach the vicinity of Finksburg, in Carroll county. From this point, for a distance of about seven miles, to Springfield, (one mile and a half north of Sykesville, on the Baltimore and Ohio Railroad) there are numerous indications of copper ores.

A mine was opened near Finksburg, about eleven years ago, and for some time was worked with success. The ore was found in a *true* vein, and consisted at first principally of carbonate of copper, which, as usual, was succeeded by a sulphuret of copper lower down. It is of the variety called purple copper ore, containing sixty per cent. of metal when free from gangue, or about thirty per cent. after being prepared for sale.

At depths of from fifty to one hundred feet the ore was abundant, and on one occasion I noticed about thirty tons lying on the surface, which I was informed was the result of one week's mining.

Subsequently the vein became thinner, or *pinched off*, as the miners call it, but there is every reason to believe that, with more knowledge of such matters on the part of the owners, the vein might have been reached at a lower depth as good as at first.

Veins of this kind are irregular in thickness, but mining to depths of two to three thousand feet has never yet reached the bottom of one of them.