

and three thousand feet, while others, owing to the overburden, are only traceable for from 300 to 700 feet.

One mile west of the Federal shaft and on a hill of the same general character as the hill on which the main camp is situated, a large quantity of float carrying the usual zinc and lead contents, is found. The slope of this hill is towards Brandy Brook with a higher ridge between it and the main vein system at the Federal camp, thus accounting for another occurrence of ore which has not been opened up at present.

In all the veins so far opened, amethystine quartz is a part of the vein matrix. It seems to run with the strike of the vein in the form of veinlets and vugs and is generally barren of ore itself, but may be in very close proximity to very rich ore. The purple coloring is caused by a small amount of manganese.

Character of Ore

The sphalerite and galena encountered in all of the openings and workings in the "zinc and lead field" is of the highest grade, being equal to the ores of the Joplin Missouri field which are considered to be the highest grades of zinc and lead ores mined, and is of a honey yellow color generally. The sphalerite shows a zinc content of from 62 to 65 per cent. with an average of less than one-half ($\frac{1}{2}$) per cent iron. This is not only the average of the