consisted of an oligoclase with the composition $Ab_3 An_1$. There are also aggregates of epidote and chlorite, frequently having definite outlines, which give them the appearance of being secondary after augite. Calcite is also present as a secondary mineral; and, as accessory constituents, ilmenite, leucoxene and sphene are found in considerable quantities.

On account of the very considerable quantity of augite which was present in the original rock, as well as on account of the large proportion of iron ore present, the rock possesses a distinctly basic character, and consequently is better classed as a basalt than as an augite andesite.

No. 125.—From the Medal Mineral Claim, Aspen Grove.

"It is an extension of a dyke of from 10 ft. to 12 ft. wide, of lighter colour than the general rock, inclined to be porphyritic in structure and containing much lime; there is an impregnation of copper sulphide, but not of important quantity."

The hand specimen shows fine-grained reddish-looking rock containing greenish chlorite aggregates and a little chalcopyrite.

Under the microscope, it is seen to be of volcanic origin, being composed of idiomorphic plagioclase containing zonally arranged alteration products and some individuals of pale green augite. The rock in some places shows a brecciated structure, the phenocrysts having broken outlines, while elsewhere may be seen aggregates of epidote individuals, apparently representing inclusions of some highly altered foreign rock. There are also certain forms now outlined in hydrated oxide of iron and filled with decomposition products, highly suggestive of the former presence of olivine. Biotite is noticeable, but is in nearly all cases wholly or partially altered to chlorite.

Native copper is present in the slides and, from its appearance, seems to be of secondary origin. It borders the plagioclase crystals in narrow strings and also occurs in bunches, running off in little strings which pass through the cracks. It sometimes occurs filling spaces which were once occupied by olivine.

The rock was probably a basalt.

No. 138.—From the Magpie Mineral Claim, lying to the west of the Big Sioux.