

the zones of contact of metamorphic with igneous rocks, Gneiss and argillaceous schist, with the porphyries, and certain argillaceous or calcareous rocks, in contact with serpentine, form with few exceptions, the true planes of concentration of metallic substances.

In examining the bed of a stream, you frequently find proofs of the existence of minerals in situ, in the adjacent rocks, and the fragments and boulders, which are found of various sizes in the bed of the stream, present in effect, the résumé of the metalliferous character of the rocks, from which they have been broken off, by the action of water or other causes; by washing the sand, particles of metal from their greater specific gravity are easily separated, and frequently pieces of the original vein stone, are found disseminated with the metal. An exact knowledge of the mineralogical character of gangues is also of the greatest utility, where the geological constituents of a country are well defined, Spathic Iron, Iron pyrites, Magnetic Oxyde of Iron, Chromate of Iron and Oxyde of Titanium; are precursors of Gold, and these characteristic minerals, associated with the Gold, have been found under a systematic arrangement, throughout the extent of my explorations on the Seigniory.

A very extensive bed or dyke of serpentine forms one of the most interesting features of the Country, and its longitudinal direction has been traced, for nearly forty miles; in a North Easterly direction, it is cut through in many places, by the streams in which the auriferous deposits are found, and the rock of the Country being a metamorphic rock, possibly an altered, sandstone, containing large crystals of Feldspar, resembling granite in structure—although stratified and alternating, with argillaceous schists, is in immediate contact with the serpentine, the planes of which are represented by veins of quartz—very ferruginous—with seams of Tremolite, Actinolite, and sometimes, Rutile or Oxyde of Titanium.

Some of the peculiarities of this Country, bear a striking analogy to the auriferous formations of Russia, and the Southern States, which required only an