acter of the feldspar grains in this portion may perhaps be thus explained.[1]

Above the basal division the rock becomes a purely quartzose one, and the red color disappears. This middle portion of the formation, as shown in Clinton county, becomes however its base to the west and south, because of the gradual encroachment of the subsidence in those directions, explaining the lack of arkose in St Lawrence county and in the Mohawk valley. Because of the occurrence, in St Lawrence county, of a quite pure, quartz sandstone resting on an uneven surface of crystalline rocks, Smyth has argued for a humid climate with rapid weathering at the time; and that, owing to the resistant character of the underlying rocks, the waves did not act for a sufficiently long time at a given level to plane away the rock floor to an even surface, though the time was sufficiently long to weather and triturate all minerals save the extra resistants quartz.[2] The writer quite agrees that a change in climate is probably indicated by the change in the rock character.

The offshore mud deposits of Potsdam time are nowhere exposed to view about the region. Some slight deposit of limestone took place, as shown by Walcott for the district about Saratoga, and by the well records published by Orton for the Oswego county region. The formation tends often to become somewhat calcareous or rather dolomitic, above, and everywhere grades into the overlying Beekmantown through a series of passage beds, which show rapid alternations of the two sets of contrasting conditions, the one gradually overcoming the other, so that subsidence must have been progressive, and no great time interval could have elapsed between the two deposits.

The bulk of the Beekmantown formation is composed of sandy dolomites, all very barren of fossils. They seem to the writer to indicate shore conditions and to a considerable extent "salt pan" conditions.[3] With the oncoming of Beekmantown time subsidence

[1]The writer has long been of the opinion that the early Potsdam climate was an arid one; and recent correspondence with Mr van Ingen has disclosed that he is also disposed to hold a similar view and is investigating the matter with the development of new and interesting evidence.

[2]N. Y. State Geol. 19th Rep't 1899, p.r100–2.

[3]Dana, J. D. Man. of Geol. ed. 4, p.133.