to diminish the mean height of the sea 32 feet, in order to have a pressure of an atmosphere more; and it is by this pressure that the degree of temperature at which water boils will also be raised higher. M. Laplace judges from the height of the sea during flowing and ebbing, that the mean depth of the sea is about 96,000 feet. Supposing three-fourths of this mass of water were converted into vapour, the pressure of this vapour would be nearly equal to 2250 atmospheres; and this pressure would so augment the degree of heat at which water enters into ebullition, that the primitive mountains might be in a state of fusion, without the water with which they are covered being heated to the boiling point; for the water which is not converted into vapour, and whose quantity is a fourth of the whole mass of vapour, according to the supposition which we have made, would cover the whole earth, because water expands in increasing proportion if the temperature be raised, and because the expansion of water is much greater than that of the mass of our primitive mountains; and, consequently, according to this supposition, our primitive mountains are formed, covered with red hot water. The great pressure of so many atmospheres necessarily modifies the reciprocal affinities of the substances which compose the primitive mountains.

Primitive mountains are distinguished from volcanic productions in this, that the lime and magnesia, which in them are combined with carbonic acid, form with the silex silicates and bisilicates. It is necessary that the silex, which, under the ordinary pressure, and at an elevated temperature, expels the carbonic acid, exercise no influence under the pressure of so many atmospheres;