

ON THE FORMATION OF MAGNESIAN LIMESTONES.

BY T. STERRY HUNT,
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At a meeting of the Canadian Institute, held on April 10th, 1858, Professor Chapman produced, and deposited with the Institute, a sealed packet containing a notice of certain investigations and demonstrative experiments then in progress, by Mr. T. Sterry Hunt, of the Canadian Geological Survey. Mr. Hunt's investigations having now been sufficiently advanced to admit of the publication of his views, the sealed packet has been opened, by his directions, and is herewith appended to the communication, which sets forth the special views he claims to have adopted at the annexed date.—*Ed. Can. Jour.*

NOTE ON THE ORIGIN OF DOLOMITES.—BY T. STERRY HUNT.

The results of a long series of investigations and experiments relative to the formation of dolomites or magnesian limestones, have led me to reject the idea of their metamorphic origin from the alteration of limestones in the manner generally understood. I conceive that dolomites have been formed in sea basins, from which the soluble salts of lime have been completely separated, as sulphate or as carbonate by the agency of alkaline carbonates, which afterwards give rise to carbonate of magnesia. This carbonate appears capable, under certain conditions, of slowly combining with carbonate of lime, and forming with it a double carbonate, which is dolomite.

The experiments required for the complete demonstration of this theory are as yet unfinished, but I wish by this note to take priority in the solution of a difficult and hitherto unresolved problem in Chemical Geology.

Montreal, March 30, 1858.

The mode in which magnesian limestones occur, often interstratified with beds of pure carbonate of lime, has induced some recent observers to reject the notion which supposes dolomite to have been formed by the alteration of beds of limestone, whether by magnesian vapours, as supposed by Von Buch, or by the intervention of magnesian solution, as conjectured by Haidinger and Von Morlot.