

1331 Spruce St., Philadelphia, Pa.

Peruse

Oct. 24/90

Sir J. W. Dawson L. L. D.
McGill College
Montreal P. Q.

Dear Sir

I have just received your very kind favor of the 22^d & am exceedingly obliged to you for the information contained therein. I am very glad you think there is at least a possibility of the gypsum having been derived from anhydrite by hydration. During a hasty visit to Hants County, Nova Scotia, a year ago I saw several of the large gypsum openings & was struck by the apparent possibility of such a transition having taken place, but I was anxious to hear the opinion you

had formed from your many observations in that country. The immediate object of my visit was to see the manganese deposits in the Lower Carboniferous marine limestone, in connection with a report I was writing on the manganese ores of the United States; but my attention was greatly attracted by the very many other interesting geological features of the country, & it was with renewed interest that, on my return, I again read your *Acadian Geology*. I was especially struck by the brecciation of some of the beds associated with the gypsum, and this, in connection with the intimate association of the hydrous & anhydrous forms of sulphate of lime, suggested to me the

idea that the association might be due to
exposure from hydration. In a brief description
of Nova Scotia manganese which I wrote later
& which will shortly appear in my report on
The manganese of the U.S., of which I shall
take pleasure in sending you a copy, I quoted
your proposition as to the formation of pyrum
by the action of sulphuric acid from volcanic
action on carbonate of lime, & suggested the
possibility of the above-mentioned source of
precipitation. After I had done so, & as I hope
to see more of Nova Scotia geology, I felt that
I would like to know your opinion on the
subject of hydration, as I knew that there was
no one so intimately acquainted with the geology
of the subject as you, & therefore I took the

liberty to write the hurried
note you received from me.
Again thanking you for
your very kind reply to my
inquiries, I remain

Most respectfully yours

R. A. F. Penrose Jr.