

STATE OF MICHIGAN.

No. 8.  
IN SENATE,

February 10, 1843,

---

Annual Report of the State Geologist,

OFFICE OF STATE GEOLOGIST,  
Detroit, January 31, 1843.

*To the Hon. Legislature of Michigan:*

I have the honor to submit the following report of the condition of the Geological survey of our State, and the progress which has been made towards the completion of the same.

Since the date of my last report, upon this subject, I have been chiefly engaged in arranging and putting in shape, the immense amount of details, both Geological and Topographical, which have been accumulated during the progress of this work; in analyzing and studying the immense collection of specimens illustrating the Geology and Mineralogy of our State, a large portion of which specimens had remained unopened until the past summer; and in the chemical analysis of our soils, minerals and rock specimens. This work, preparatory to the final report upon these subjects, involves a much larger amount of labor than had been originally estimated, a labor which no one, unless intimately connected with the work, could fully appreciate.

In addition to the office work above mentioned, a small amount of field work has been done, consisting chiefly, of closing up and connecting points where the work was incomplete.

The field work for the entire survey is completed, with the exception of some few points where the work still wants connecting, and which will not involve any material expense.

The work in the Topographical or drafting office, during a portion of the year, was suspended, in consequence of the absence of the Topographer, who was engaged for several months in "locating" lands for the State. Notwithstanding this delay, a large amount of drafting has been accomplished, and that portion relating strictly to the Topographical survey, is so far advanced that a very large portion of the work is now ready or may soon be made ready for the hands of the engraver. There remains in addition to the amount of drafting yet to be done for the Topographical and Geological maps, a very considerable amount of drafting, such as Geological sections, &c.

The publication of State and county maps, as directed by the Legislature, was long ago commenced, and the engraving of several of these maps had been completed before the date of my last report, but the inability to procure such funds as would enable me to purchase

paper for striking them off, has caused much delay in the publication, and in fact for a time virtually suspended all action upon this subject. Notwithstanding this embarrassment in procuring such funds as could be applied to this purpose, such arrangements were made as led me to hope that I would have been enabled, before this time, to lay before the public, for sale, according to the provisions of the act directing the publication, an edition of 1000 each of six of our most populous counties. The reception of these maps was prevented by the early closing of navigation, and although such arrangements had been made as led me to hope they would be transmitted by the over land route, they have not yet come to hand.

This series of State and county maps, it is hoped and believed, will be more full and perfect than any which have heretofore been published, of any equal portion of our United States; and there can be no doubt but when once spread before the public, showing as they do the general character of soil, timber, &c. &c. they will do much to disseminate a knowledge of the immense capabilities of our State, and the advantages which she offers to the emigrant; and that they will in that way afford efficient aid towards increasing her population.

The delay which has occurred in the publication of these maps has been a source of deep mortification and regret to me, but circumstanced as I have been, it has been utterly out of my power, until within a few months past, to make such arrangements as would enable me to move forward with the work. When the maps already engraved shall have been thrown before the public, it is hoped and believed that a sufficient amount will be received for their sale, to enable me to proceed with the engraving and publishing of the balance without further embarrassment, and that they will more than pay the expenses incident to their publication.

The selection by the State of extensive tracts of land in some of the newer counties, and the proposed early disposition of these lands by Bale, renders it highly important that maps of the counties where these selections have been made, should be completed at the earliest day possible; and I have made arrangements to carry this into effect. Although the older counties have legitimate claims for the first publication of their county maps, it is conceived the interests of the whole State will be advanced by the course proposed.

The engraved plates of these maps will remain nearly as perfect after the proposed edition shall have been worked off, as they were at first, and as other editions may, from time to time, be wanted, the Barnes of newly organized towns, new roads, &c. may be added without difficulty, and at an expense merely nominal.

I deem it unnecessary, at this time, to lay before you the details of work done, or to give further description of portions of our country which have been passed without notice, in the very general reports which have heretofore been made to you, for I hope in due time to offer a final

and systematized report, that shall embrace, in a condensed form, all that has been accomplished.

The Geological and Topographical surveys of our State which have been carried forward by a corps, few in number compared with that furnished by many of the other States, & extending as it does over an area greater than that claimed by any of them, has been a work of immense labor. To accomplish the end desired, the most constant and untiring industry has been required, added to which it has been necessary, during protracted periods, in a wilderness country, to dispense with the ordinary comforts of life; but suffering as I have from the severe duties incident to this work, the labor has been rendered light by the hope that in aiding to develop the resources of our State, in placing upon maps her Geology, Topography and the character of her timber and soil her settlement might be increased, and something added to her prosperity and wealth.

The condition of the fund placed at my disposal for this department is as follows, viz:

	Dr.	Cr.
By amount in my hands at close of last fiscal year,		\$1 42
Amount appropriated for 1842,		400 00
		<u>\$401 42</u>
To amount paid sundry bills connected with surveys in Upper Peninsula, chiefly for 1841,	\$250 61	
Rent of Topographical office and contingent expenses for the same,	50 33	
Drafting paper, stationery and binding of platt books for Topographical office,	74 83	
Postage,	19 47	<del>\$395 24</del>
Balance in hands of State Treasurer,		<u>\$6 18</u>

There will be required for the current year, an amount sufficient to cover incidental expenses, of a character similar to those above enumerated, which may be estimated at three hundred dollars.

I have already laid before you a general report upon those attached duties connected with the improvement of the State Salt Springs, which cannot be considered as forming any part of the Geological survey. These duties, which have cost me much labor and anxiety, have drawn deeply upon that time which should have been more directly occupied in the Geological survey. At present, however, these attached duties interfere comparatively little with the other portions of the work, but heretofore they have done much to retard its progress.

All which is respectfully submitted.

DOUGLASS HOUGHTON,  
*State Geologist*