[TRANSACTIONS OF THE AMERICAN INSTITUTE OF MINING ENGINEERS.]

## THE GEOLOGICAL RELATIONS OF THE PRINCIPAL NOVA SCOTIA MINERALS.

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ANY estimate of the economic mineral value of an unvisited district is to the mining engineer largely a comparative one. If he knows that certain minerals characterize any given geological horizon he naturally draws upon his experience of the same ores as met by him under similar geological conditions. And if he has not had the personal experience, the investigation of the geology of a similar district as given in a trustworthy report enables him to lay a fair basis for conclusions.

In a general way these conclusions are of value, and while they pronounce on the possible mineral fecundity of a given district, they often give a decided rebuttal to startling statements of discoveries of ores.

The number of the geological horizons in Nova Scotia is limited, but they are well developed, in some case typically, and exert a prominent effect on the agricultural and industrial distribution of its inhabitants.

The following table, based on Sir William Dawson's Acadian Geology, will serve as an outline for my notes :

Modern. Triassic sandstone and trap. Permo Carboniferous.

549

| Carboniferous  | Upper coal measures.      |
|----------------|---------------------------|
|                | Productive coal measures. |
|                | Millstone grit.           |
|                | Marine limestone.         |
|                | Lower Carboniferous.      |
| Devonian       | ∫ Upper Helderberg.       |
|                | Oriskany.                 |
| Upper Silurian | f Lower Helderberg.       |
|                | Clinton.                  |
|                |                           |

Lower Silurian.

Cambro-Silurian.

Cambrian, Longmynd series. Laurentian.