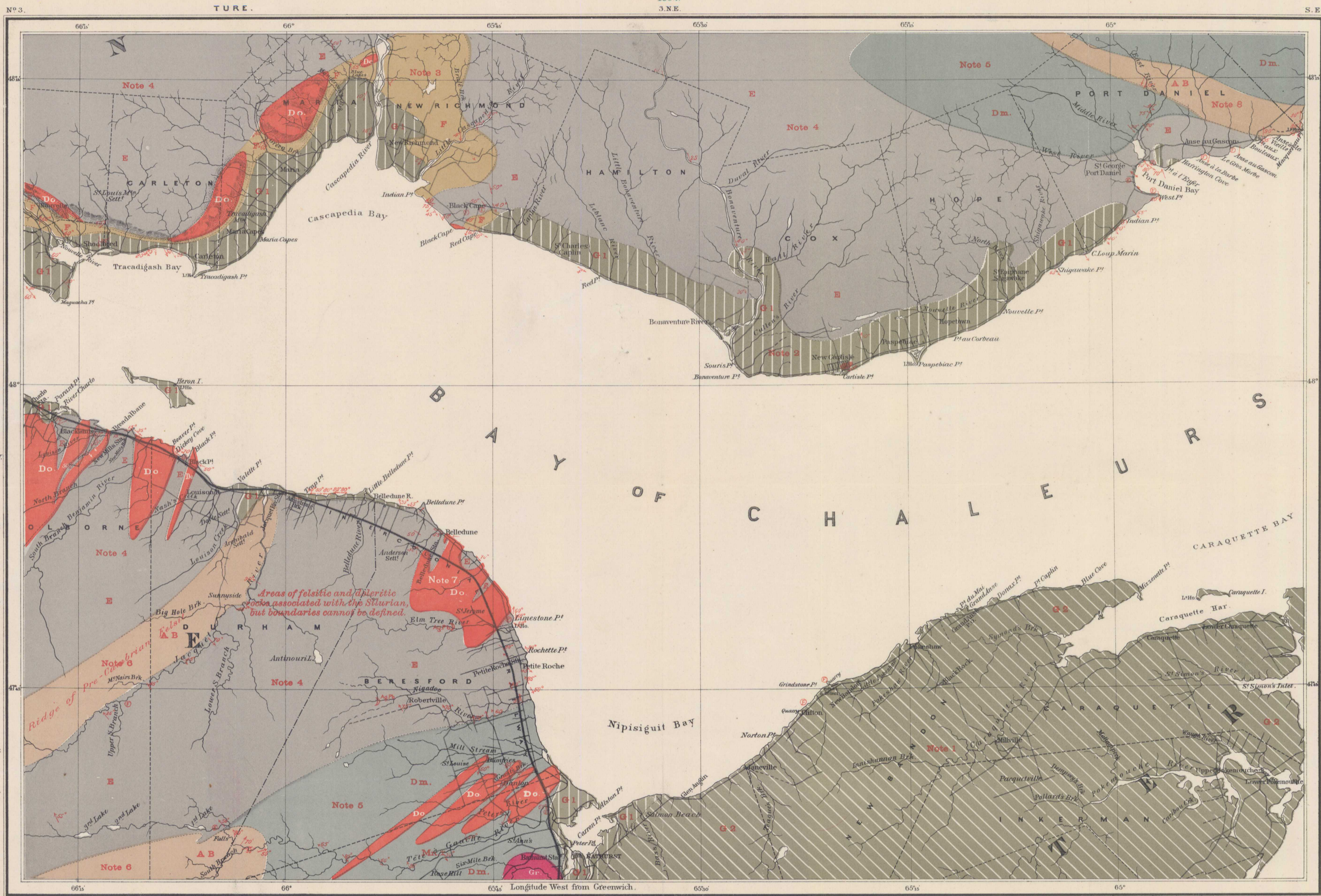


Geological Survey of Canada.

Alfred R.C. Selwyn L.L.D., F.R.S. & Director.
1882.
S. N. E.



Explanation of Colours.

- G.2. Middle Carboniferous.
 - G.1. Lower Carboniferous.
 - F. Devonian.
 - E. Silurian.
 - Dm. Cambro-Silurian.
 - A.B. Pre-Cambrian.
 - Do, Di. Dolerite, Diabase, etc.
 - Tr. Fel. Trachyte, Felite.
 - Gr. Granite.
- Geological boundaries.
Parish Lines.
County Lines.

Note 1. The Middle Carboniferous of the south side of the Bay of Chaleur, consists of several thin seams of coal as at Clifton and in the Island of Shipagan, but the thickness in the former place is not sufficient to render it of economic value. At the latter place it has not yet been opened up, and its actual value is as yet unknown.

Note 2. The Lower Carboniferous (Bonaventure formation) is most extensively developed along the north side of the Bay of Chaleur, and forms a narrow margin for the greater part of the distance from the mouth of the Saguenay River, opposite the Island of Shipagan, to the mouth of the St. John's River, north of Bathurst. It occurs generally in small patches or selvages, overlying the Silurian rocks, which frequently form the lower part of the cliffs. Its stratigraphic position is apparently between the gypsiferous portion of the Lower Carboniferous, as developed in the Millstone Grit. With the exception of a small deposit of copper at the mouth of the Saguenay River, no minerals of value have been found in this division.

Note 3. The Devonian consists principally of moderately coarse grey conglomerates, sandstones and shales, though red beds occur at several places. The largest area is that of the Great Cascapedia, below the Saguenay Bay by the feet beds of the Lower Carboniferous. The beds of the Cascapedia, though containing abundance of corals and brachiopods at several points, have not so far yielded the rich flora and verterbrate fauna of the apparently separated from the more eastern or the beds of the Saguenay and other rocks. These probably represent the upper portion of the Devonian system, while those of Campbellton belong to its base.

Note 4. The rocks which have the greatest development in northern New Brunswick as well as in the southern portion of the peninsula of Gaspé, are of Silurian age. They consist largely of limestones, sometimes crystalline, sandstones and shales, often calcareous, and containing in many places abundant organic remains. The basal portion of this system as developed at Port Daniel and in the vicinity of Elm Tree River, probably corresponds nearly with the Niagara formation. The Silurian system contains deposits of minerals at several places—namely in New Brunswick, where the so-called silver mines of Nigadoo and Elm Tree are located. These very near the base. Quartz veins are abundant, and have been reported to carry gold, but those examined by us are barren. The strike of the rocks on both sides of the Bay of Chaleur is pretty constantly east and north-east. Many of the limestones as at Port Daniel and Elm Tree are used quite extensively for the production of lime.

Note 5. The Cambro-Silurian of the northern part of New Brunswick is generally poor in organic remains. At several points, however, traces of them are discernible, and at the railroad bridge on the Rive à Gasche River a band of black shales contains abundance of graptolites, which strongly resemble the forms found in the Utica formation. These are in places along the same river, associated with beds of red and green shales, with sandstones, the whole presenting considerable resemblance to some portions of the Quebec Bathurst, as compared with that of the north of the Saguenay. From the direction of the beds north of the Saguenay, it seems very probable that the formation under the waters of the Bay of Chaleur, extending imperfect forms, brachiopods, etc., are found in the strata in the vicinity of the Saguenay, but the upper part of the Cambro-Silurian at this point appears to merge gradually into the lower beds of the Silurian, the lower portion of which is believed to a considerable extent, possibly from the intrusion of large areas of doleritic rocks. It is near the line of contact of these two systems that the mineral deposits of this locality occur.

Note 6. The ridge marked Pre-Cambrian consists principally of hard crystalline felsites, underlying the Silurian fossiliferous beds. It is apparently a continuation of the Pre-Cambrian felsite area about the Ripsiguit River, and in many respects resembles strongly in character the old felsites of the southern part of the province.

Note 7. The intrusions of trappean rocks (dolerite, diabase, with some felsites) present prominent features in the area bordering on the Bay of Chaleur. They appear to be intermediate in age between the Silurian and Devonian, as they have cut the upper beds of the former, but do not appear to have sensibly affected the latter, unless in the very lowest beds of the system, as at Campbellton, where Devonian shales are found contained in a fractured calcareous rock. Throughout the Devonian the conglomerates also contain abundance of trap pebbles, while the position of the beds in many places show that to have been deposited around the bases and flanks of the trap ridges. They do not apparently contain minerals of economic value, except at Black Cape, where several beds of various colored coals occur in a fissure. The trappean hills often rise to a considerable elevation, especially along the north-side of the bay, and extend in a series of peaks and ridges from above Campbellton to the Great Cascapedia River.

Note 8. The rocks of Cape Macquerean and vicinity, which extend across from the Port Daniel River, have long been classed under the general heading of the "Quebec Group." They, however, apparently consist of two distinct and uncorrelatable sets of beds, which strike almost at right angles to each other. They also differ markedly in mineral character, the newer consisting of sandstones and shales, among which black graptolitic beds occur, while the older are mostly hard metamorphic rocks, quartzites, felsites, etc., with felspathic and siliceous schists. They have on these grounds been divided into two groups, the former being assigned to the Cambro-Silurian and the latter to the Pre-Cambrian.

Compiled and drawn by R.W. Ellis, from Plans made by the Admiralty, Crown Lands and Geological Surveys.

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