SYDNEY COAL FIELD.

Andrew Channel, and bringing up in its axis rocks generally containing quartz, hornblende and sometimes mica in addition to felspar-

In the Cape Dauphin district, red syenite and granite are intimately associated and alternate with fine-grained gneisses and felsites.

2. GEORGE RIVER LIMESTONE SERIES.*

On the south-eastern'slopes of the Boisdale and St. Ann hills, there runs a narrow zone of rocks, seldom exceeding half a mile in width, consisting of highly crystalline limestone and dolomite, containing serpentine, talc, asbestus, mica, tremolite, graphite, galena, hæmatite, magnetite and other minerals; associated with felsite, syenite, diorite, mica-schist, quartzite and quartzose conglomerate, of various colours, but chiefly bluish, assigned by Mr. Hartley to the Laurentian. This formation includes the marble of George River, of Marble Mountain and Eskasoni and the great bed of white dolomite quarried at New Campbellton, an analysis of which is quoted on page 15.

3. BARACHOIS SLATES AND OTHER ROCKS-CAMBRIAN.*

The rocks in Cape Breton described as Lower Silurian in the earlier Reports, comprise beds, referable, on the evidence of their fossils as determined by Dr. G. F. Matthew, to horizons from that of the Etcheminian to that of the Lingula Flags. In the area to which these maps refer, they are chiefly of the age of the Lingula Flags series. On St. Andrew Channel they comprise reddish, greenish, purple, bluish and gray slate, argillite, quartzite, sandstone, conglomerate and limestone; while black, bluish and gray graphitic slaty argillite, containing *Dictyonema sociale* and other fossils extends up along McLeod Brook.

4. THE CARBONIFEROUS CONGLOMERATE SERIES.*

By Mr. Richard Brown, this formation was separated from the Carboniferous and correlated with the Devonian or Old Red Sandstone of England. It generally flanks the metamorphic hills which form the axes of the anticlines and from which its pebbles have obviously been derived. Its thickness is variable. On Watson Brook it seems to

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^{*} Reports of Progress, Geol. Surv. Can., 1870-71, pp. 4-5; 1873-74, pp. 174, 252 to 262; 1875-76, pp. 381 to 388; 1876-77 p. 426.

^{*} Reports of Progress, Geol. Surv. Can., 1875-76, pp. 388 to 393 ; 1876-77, pp. 428 to 437.