SYDNEY COAL FIELD.

Such natural advantages, combined with its highly favourable geographical position, point to this district as probably the most important in the Dominion for the supply of fuel to steamships navigating the Atlantic. During the few months of winter, when the more northerly harbours are closed or obstructed by ice, an outlet is afforded by the railway connecting many of the collieries with Louisburg, a fine harbour, open and safe for shipping at almost any season.

The aggregate thickness of coal in workable seams, outcropping on the shore, and for the most part exposed in the bays and cliffs, is from forty to fifty feet; the seams vary from three to nine feet in thickness. They generally dip at a very low angle, and appear to be very little affected by faults or disturbances. As the strata all dip seaward, much of the coal will be available in the submarine as well as in the land areas. From experience at the Sydney mines it has been fully established that, with due caution and care, these submarine areas may be worked to a large extent.

The coal is of the bituminous or 'soft' variety, with comparatively little diversity in the quality of the different seams; all of which yield a fuel exceedingly well adapted for general purposes, while that of some of them is specially applicable to the manufacture of gas. As compared with the Pictou coal, it is characterized on the whole, by a greater proportion of combustible matter and a smaller proportion of ash; but on the other hand it usually contains a greater amount of sulphur.

The rocks of this district are affected by three anticlinal and four synclinal folds, approximately parallel to one another, the latter named respectively the Cow Bay, Glace Bay, Sydney Harbour and Bras d'Or basins. The several folds are, as already stated, marked by the occurrence of bays and channels running in a direction nearly parallel to their axes. The subdivisions are thus geographically, as well as geologically, well marked.

The strata associated with the coal-seams may be described under the following heads :—(1.) Argillaceous shale ; (2.) Arenaceous shale ; (3.) Red and green marl ; (4.) Sandstone ; (5.) Under-clay ; (6.) Limestone; (7.) Black shale ; (8.) Coal. Detailed sections of the alternations of these beds in the various basins are given in the Report for 1874-75.

1. Argillaceous Shales.—These strata, together with the arenaceous shales (2) into which they pass by insensible gradations, and red and