

CHAPTER 10. PICTOU COUNTY

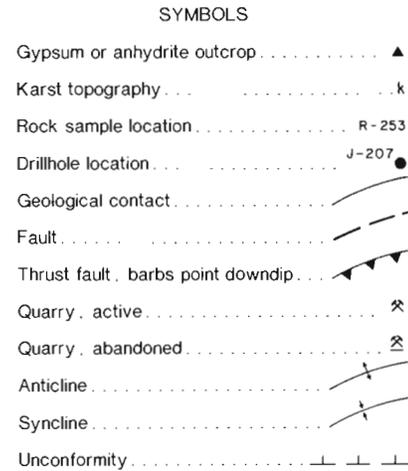
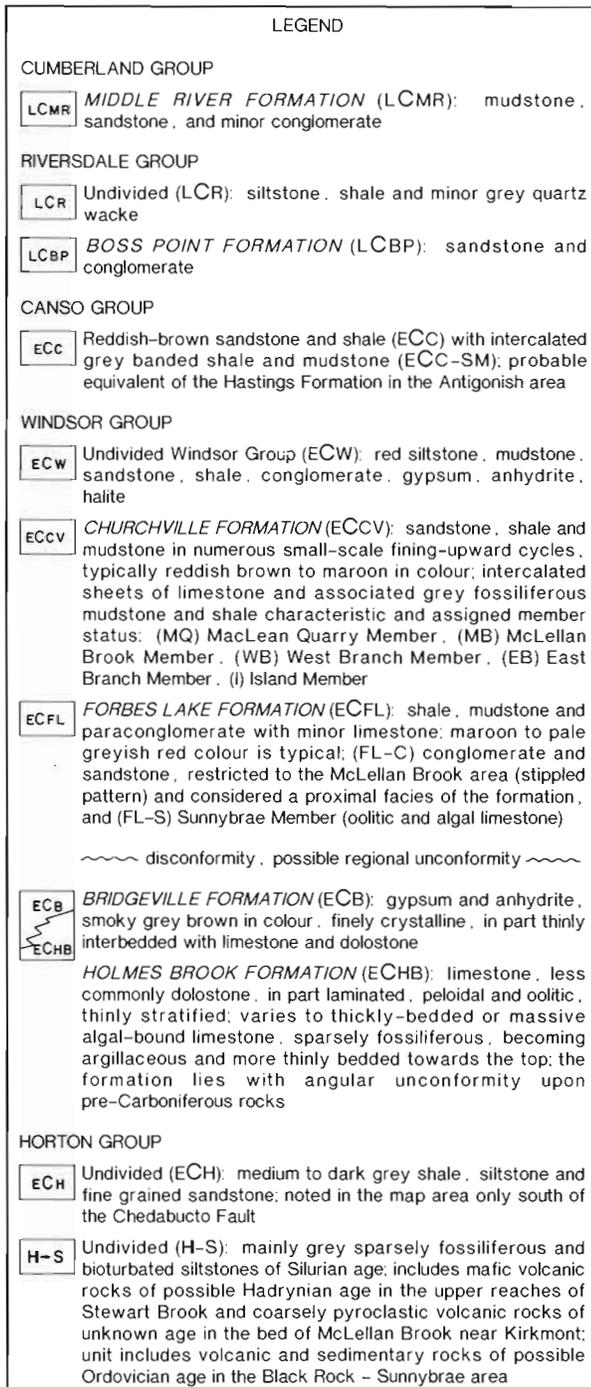


Figure 10-1. Continued.

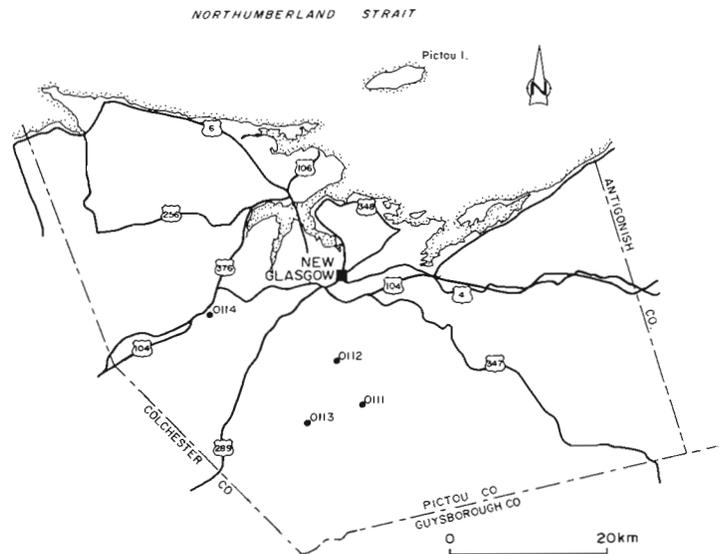


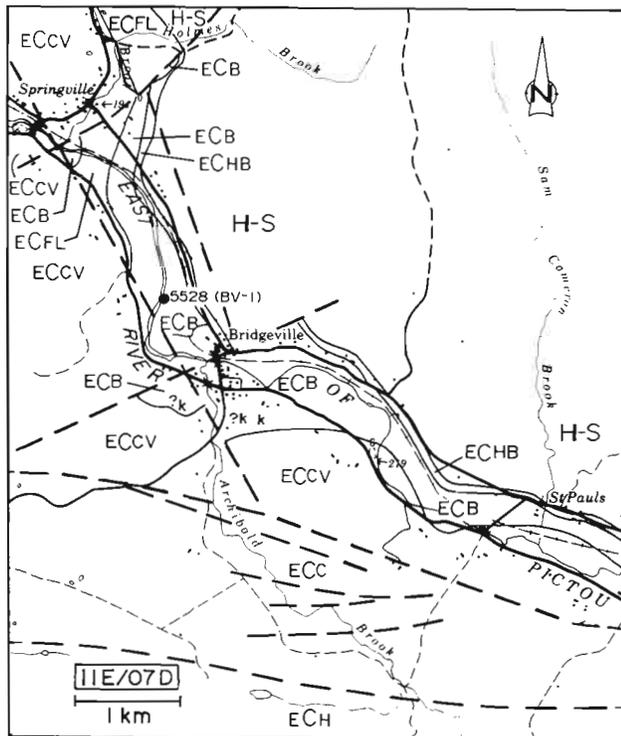
Figure 10-2. Location map for Pictou County gypsum and anhydrite occurrences by reference number.

modified after Giles, 1982b

Figure 10-1. Geological legend for Pictou County gypsum and anhydrite occurrence maps.

BRIDGEVILLE (0111)
NTS 11E/07D
UTM 530100 E 5031420 N

The Bridgeville occurrence area is located 15 km south-southwest of the Town of Stellarton, Pictou County (Fig. 10-3). The occurrence consists of subsurface information from diamond-drill hole BV-1 (NSDME 5528) which was completed by Merrill Island Mining Corp. Ltd. in 1971 (Province of Nova Scotia, 1972), as well as an area of possible karst topography south of the Village of Bridgeville.



Geology after Giles, 1982b

Figure 10-3. Location and geology of the Bridgeville occurrence area. See Figures 10-1 and 10-2 for legend and location.

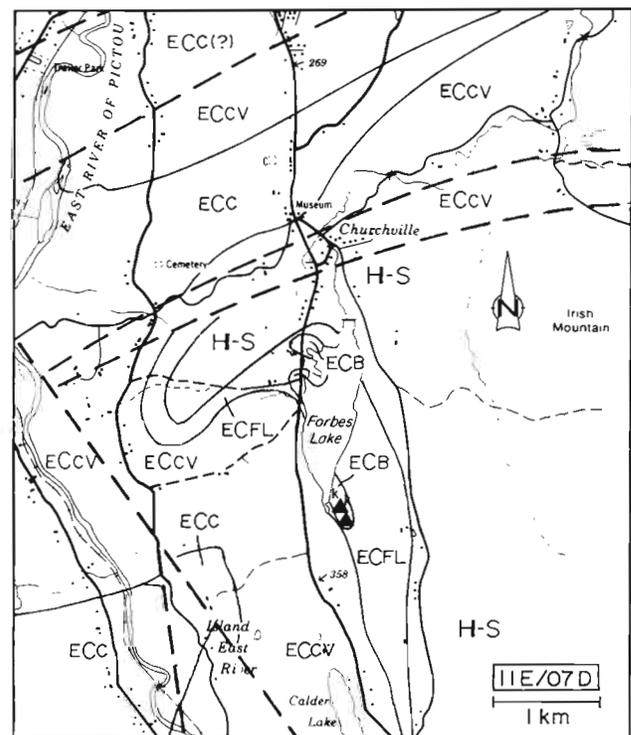
Giles (1982b) mapped the area around Bridgeville as underlain by units of the sulphate dominated Bridgeville Formation of the Lower Windsor Group. These beds, although offset by various faults, strike north-northwestward along the valley of the East River of Pictou and dip to the southwest. They overlie the basal carbonate Holmes Brook (Gays River) Formation, to the northeast which in turn overlies older basement rocks. The Bridgeville Formation is overlain to the west by clastics of the Forbes Lake Formation as well as the Upper Windsor Churchville Formation to the south and west.

Drillhole BV-1, an inclined hole, encountered the following horizons (corrected thicknesses): 22 m of over-

burden, 52.4 m of gypsum, 106.9 m of anhydrite and 12.1 m of basal carbonate before entering the underlying clastics. Although the gypsum thickness encountered is significant the limited areal extent of the Bridgeville Formation in the subsurface would limit the chances of development in the Bridgeville area. Consequently, this occurrence is of geological interest only.

FORBES LAKE (0112)
NTS 11E/07D
UTM 528200 E 5037100 N

The Forbes Lake occurrence is located at the southern end of Forbes Lake and consists of a small area of karst topography with gypsum outcrops, approximately 10 km south of the Town of New Glasgow, Pictou County (Fig. 10-4). A few sinkholes were also reported around the



Geology after Giles, 1982b

Figure 10-4. Location and geology of the Forbes Lake occurrence area. See Figures 10-1 and 10-2 for legend and location.

northern end of the Lake (Fletcher, 1902). The area is underlain by units of the sulphate dominated Bridgeville Formation (Giles, 1982b). These are surrounded by shales, mudstones and paraconglomerates of the Forbes Lake Formation which are overlain to the west by clastics of the Churchville Formation. This occurrence was noted by Fletcher (1902) and Giles (1982b). However, the area is now part of the New Glasgow Water Supply Area so access is restricted. Although this occurrence was not visited or sampled during the course

of this study, it appears to be geologically similar to occurrences in the western part of the Antigonish Basin (Ohio (0109), Antigonish County).

LIMEROCK (0114)

NTS 11E/10B

UTM 511600 E 5043500 N

The Limerock occurrence is a subsurface occurrence found in what appears to be a fault-bound block of the Windsor Group situated approximately 16 km west-southwest of the Town of New Glasgow, Pictou County (Fig. 10-5). Murray (1975) drilled four holes at Limerock in 1968. One of these holes, NSDME 4674, encountered gypsum at a depth of 44.3 m and stopped in the same unit at 47.6 m.

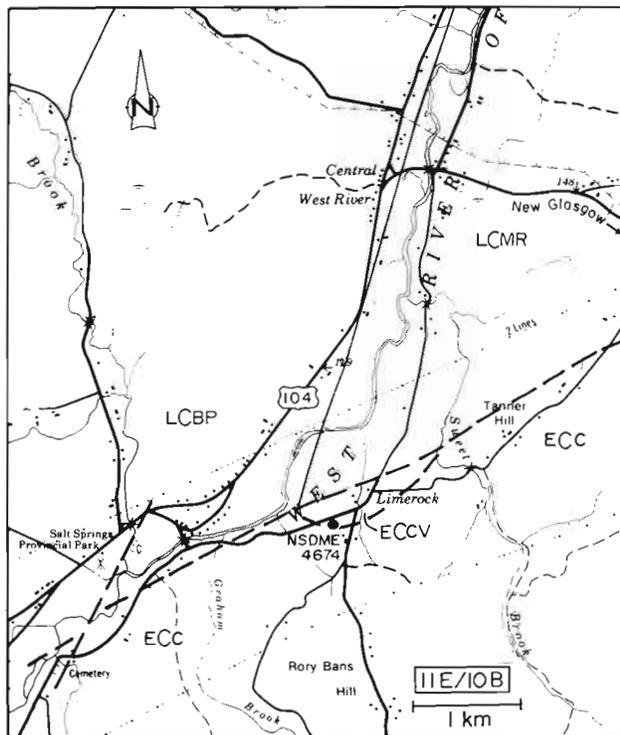


Figure 10-5. Location and geology of the Limerock occurrence area. See Figures 10-1 and 10-2 for legend and location.

Regional geological mapping by Yeo (1987) indicated that the immediate area is underlain by Upper Windsor Group Churchville Formation. These units are in fault contact to the north with clastics of the Late Carboniferous Cumberland Group (Middle River Formation) and also in fault contact with clastics of the Canso Group to the south. The block of Windsor Group rocks appears to be only 1500 m long by up to 300 m wide, dipping southward under the Canso Group.

Giles (1979) examined the carbonate section found in the Nova Scotia Department of Mines and Energy drillholes at Limerock. He suggested that this limestone could be correlated to the Hebert River Limestone Member which is placed at the base of the Upper Windsor (Moore, 1967). Generally, sulphate horizons found at the top of the Cycle 2 (B Subzone) are thin and make poor economic prospects. This, in combination with the limited areal extent of the Windsor Group at Limerock, make this occurrence a geologically interesting zone, but not of much economic interest.

LORNE (0113)

NTS 11E/07D

UTM 523350 E 5029700 N

The Lorne occurrence is located 6 km south of the Village of Hopewell, Pictou County (Fig. 10-6). It consists of a small area of light karst topography with numerous small heads containing fine grained, light grey to white gypsum. The property owner (MacQuarrie, personal communication) described plaster production at this site by his grandfather. This material would probably have been consumed locally.

Benson (1967) provided the most recent regional mapping over the immediate area. Some of Benson's

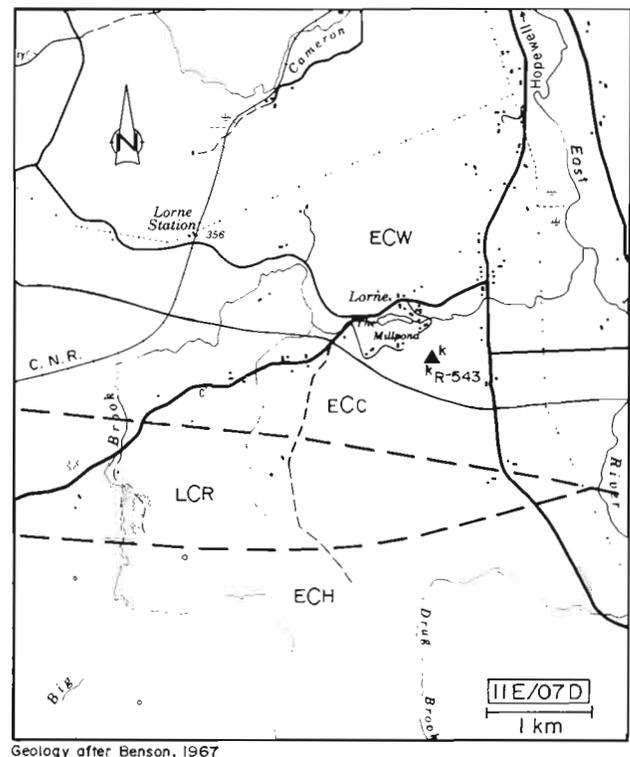


Figure 10-6. Location and geology of the Lorne occurrence area. See Figures 10-1 and 10-2 for legend and location.

(1967) geological interpretations differ with those of Giles (1982b) whose Map 82-3 overlaps the eastern side of Benson's (1967) mapping. That notwithstanding, Benson (1967) showed the Lorne occurrence area to be underlain by undivided Windsor Group rocks which are overlain to the south by clastics of the Canso Group. The Canso Group sedimentary rocks are in fault contact with clastics of the younger Riversdale Group and older Horton Group also to the south. It is not possible, using the available information, to determine what portion of the Windsor Group is found at Lorne.

The areal extent of the gypsum at Lorne appears to be quite limited. Although it is of good quality, the occurrence's size and location, far from any point of shipping or consumption, make it of only minor economic interest. Further work will be required in order to clarify the local Windsor Group stratigraphy as well as the complex structure in this area which is adjacent to the Cobequid-Chedabucto Fault system.