

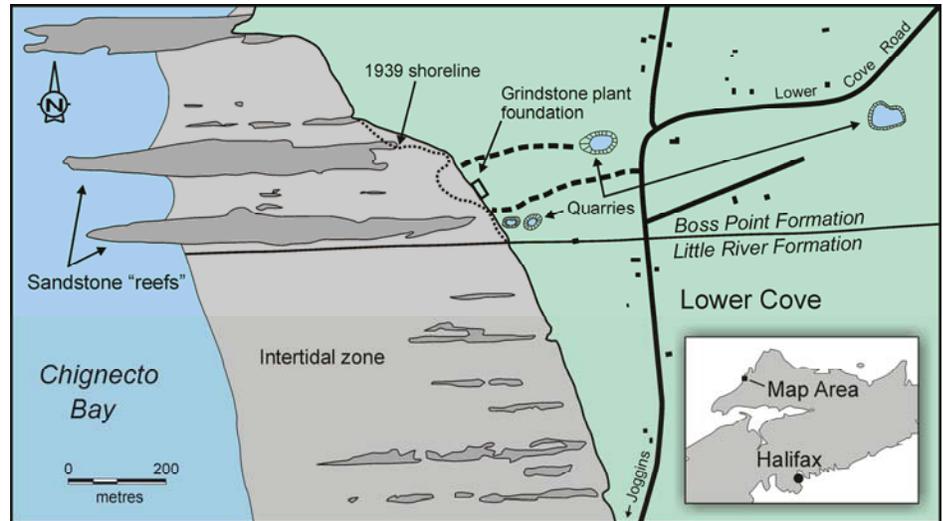
# From the Mineral Inventory Files

## Cumberland County's Historic (but Little-known) Grindstone Industry

The shoreline of Chignecto Bay may now be most famous as home to the recently designated UNESCO World Heritage site at the Joggins Fossil Cliffs. There was a time, however, when this area was home to an economically important grindstone quarrying industry. The largest of these operations were those of the Atlantic Grindstone Company at Lower Cove (Fig. 1). This company, created by Amos Seaman of nearby Minudie, operated from 1831 to the early 1900s and was an industrial mainstay of northern Cumberland County.

A combination of factors allowed this industry to thrive. First was the availability of excellent stone. Sandstone abounds in Nova Scotia, but not all sandstones are created equal. To produce suitable grindstone, a sandstone has to (1) have grains of the right size and angularity to properly grind tough steel and (2) be neither too hard nor too soft. If too hard, the stone will simply 'polish' itself and no longer grind. If too soft, the sand grains will pluck out too easily causing the stone to wear rapidly. Several beds in the Carboniferous Boss Point Formation at Lower Cove had what it took to produce the highest quality grindstones (Fig. 1). A second important factor was the location of the Lower Cove deposits on tide-water. As is still the case today, transportation costs are a vital component of the cost of an industrial mineral commodity. The ability to quickly access sea transport lanes is a strong advantage for any industrial mineral producer over landlocked competitors. The last, and probably most important, factor was the presence of a shrewd entrepreneur to recognize the opportunity and take the risks necessary to pull it all together. Amos Seaman was just such a man.

The early Acadians produced grindstones from the beach at Lower Cove and from several other sites on Chignecto Bay prior to the 1800s, but this production was mostly for domestic use. It is also known that the British army used grindstones from Lower Cove to sharpen their weapons in the war of 1812. It was



**Figure 1.** Geology of the Lower Cove area, Cumberland County, showing the location of workings of the Atlantic Grindstone Company.

not until Amos Seaman entered the picture in the 1830s, however, that the industry really blossomed. Within a couple of years the operation employed more than 100 men and boasted several quarries and buildings that covered over 100 acres (Fig. 1).

Much of the stone was produced from sandstone 'reefs' in the intertidal zone, where large slabs of rock were loosened by gunpowder then attached to rafts and floated to shore at high tide to be 'formed' in the plant. This type of production was seasonal and tide-dependant, so there were also four on-shore quarries dug along the inland strike extension of particular sandstone 'reefs' (blue grit) that featured the most favourable rock (Fig. 1). The workforce became very skilled and one man could cut 15-20 stones a day, some up to 2.5 m in diameter. The stones were widely considered to be the best in North America and production quickly went from 10,300 stones in 1831 to 30,671 in 1834. The operation made Seaman and his family wealthy. Amos Seaman, originally from New Brunswick, was dedicated to the Cumberland County area he grew up in. Seaman frequently directed some of his wealth toward local projects that benefitted the area.

Not much remains of the grindstone operation today; in fact, rising sea level has already taken away part of the work-site. The old foundation to the plant can still be found, as can a couple of the original buildings which are now local residences. The quarries are now water-filled and hazardous. The intertidal zone still shows footings for the wharf as well as an abundance of grindstones in various states of production (Fig. 2), including the remnants of broken or flawed stones from the operation. The site is still a pleasant place to visit and a little imagination can conjure the sights and sounds of what was once an important industry.

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**Figure 2.** Grindstone remnant on the beach at Lower Cove (~1.2 m diameter).