INTRODUCTION

The U.S. East Coast continental slope from Norfolk Canyon south to Cape Lookout, North Carolina represents a dramatic physiographic and sedimentological transition between the Middle Atlantic Bight (MAB) province of major submarine canyons and the South Atlantic Bight province of the Blake Plateau (BP) (Pratt and Heezen 1964; Uchupi and Emery 1967; Rowe and Menzies 1968; Rhoads 1993). The northern portion of the transition region, beginning just south of Norfolk Canyon, approximates physiographic, sedimentary and faunistic conditions characteristic of the overall MAB (Blake et al. 1987). The central portion of this region, just north of Cape Hatteras, is unique hydrographically: 1) as the zone where the northward flowing Gulf Stream meets the southward flowing Virginia current (Ford et al. 1952; Bumpus and Lauzier 1965; Heezen 1968; Norcross and Stanley 1967; Csanady and Hamilton 1988), and 2) as the zone where the Gulf Stream crosses the underlying southward flowing Western Boundary Undercurrent (Barrett 1965; Heezen 1968; Richardson and Knauss 1971).

Recent investigations revealed that the Hatteras slope (in an area of undetermined geographic extent) is characterized by anomalous biological and physical attributes. These include the highest densities of benthic infauna anywhere along the U.S. East Coast continental slope (Blake et al. 1987; Brown 1991; Schaff et al. 1992), unusual communities of benthic fishes and megafaunal invertebrates (Rowe 1971; Blake et al. 1987; Hecker 1993; Sulak and Ross 1996; S. Stancyk, pers. comm.), a particulate sedimentation rate much higher than that of adjacent regions (Schaff et al. 1992), and sedimentary evidence for an exceptionally high flux of labile organic carbon to the bottom (Schaff et al. 1992). Unusually high levels of suspended matter with atypically high percentages of combustible organic matter have been reported (Heezen 1968; Manheim et al. 1970) in overlying surface waters of the area.

In addition to the unique physical and biological attributes of this region, the area has been a target for potential hydrocarbon exploration for over a decade, particularly in Minerals Management Service blocks 467 and 510 in the Manteo Unit (Figures 1 and 2). Although no wells have been drilled and only two plans of exploration (POE) were filed (Chevron Oil in 1982 and Mobil Oil in 1990), this area remains of great interest to oil companies. Generally, these POEs (as well as other proposals) have been considered problematic because of a lack of appropriate environmental data needed to evaluate potential impacts. In fact, the concerns over potential biological effects to the area from hydrocarbon exploration and the lack of scientific data prompted many of the above cited (and other) recent studies. A number of workshops and information exchange meetings have occurred over the last decade and a special panel was appointed to review the state of knowledge needed to evaluate impacts around "The Point" area (Costlow et al. 1992). Gradually various types of data have accumulated for "the Point" area, greatly improving our understanding of many issues, but the studies were not coordinated. One very important thing learned in this process of data accumulation is that "The Point" (see Currin and Ross 1999) is a productive and important fishing area, with physical conditions that concentrate biota (birds, marine mammals, turtles, fishes) in a relatively small part of the ocean.

Although the quantity of data has increased for the Hatteras slope area around "The Point", a complete catalogue of all past and ongoing studies was not previously available. The absence of a centralized data management tool has hindered attempts to discuss and evaluate the impacts of proposed hydrocarbon exploration. A centralized compilation of studies for this area was considered critical; therefore, a high priority, "short-term", task to conduct a data or research inventory of the region surrounding "The Point" was identified in the February 1998 state-federal Information Transfer Meeting (Raleigh, NC, Vigil 1998). It was suggested that this effort be tied to a Geographic Information System (GIS). To fulfill this recommendation the US Dept. of the Interior Minerals Management Service funded this project. Our objectives were to gather information on all past and current studies conducted in all scientific disciplines related to an area surrounding "The Point", generate an annotated, computerized bibliography of these studies and reference them to a Geographic Information System. While this task is not a data synthesis, it should be an important foundation of future Environmental Impact Statement or Environmental Assessment efforts. We hope that it will serve as a model for other such efforts.