

situ and that the sequence of generation is normal although somewhat skewed owing to the nature of organic-matter source. A stochastic model, combining geologic, geochemical, and reservoir data, indicates a probable ultimate potential for modest amounts of gas and small amounts of oil beneath the Scotian Shelf in a variety of structural and stratigraphic traps.

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#### Onshore Calcareous Nannofossil Biostratigraphy of Atlantic Margin Cretaceous and Paleogene

Calcareous nannofossils in onshore marine samples from 19 outcrops, 9 cores, and 23 drilled wells permit correlation of surface and subsurface units from New Jersey (NJ) to South Carolina (SC) with the exception of the Delaware-Virginia (DEL-VA) area where the Cretaceous is nonmarine. Cenomanian (nannofossil Cretaceous zone nc II) sediments are present in North Carolina (NC) and SC but not northward. Turonian (~nc 12-14) sediments are present in NJ, NC, and SC but the Coniacian-Santonian (~nc 15-17) interval is well represented only in NC, being either very thin, absent, or nonfossiliferous on the north and south. A thick laterally persistent Campanian (~nc 18-20) sequence occurs in SC, NC, and NJ and is overlain by a thinner Maestrichtian (~nc 20-23) layer. Upper Maestrichtian is present in NJ but absent in NC and SC.

The Cretaceous-Tertiary boundary is paleontologically unconformable along the Atlantic margin with lower to upper Paleocene resting on lower to upper Maestrichtian. The Paleogene is thinner than the Cretaceous owing to decreased thermal subsidence of the aging Atlantic margin coupled with general marine regression. Lower (~NP 1-2) and Upper (~NP 5-9) Paleocene strata are laterally persistent from NJ to NC (including DEL-VA) but are not yet studied in SC. Lower to middle Eocene sediments (NP 10-15) are persistent throughout the Atlantic Coastal Plain but middle to upper Eocene units (NP 16-20) are absent north of VA. Lower Oligocene strata (NP 21-22) are present only in NC whereas upper Oligocene (NP 23-24) sediments extend from NJ to VA

but not southward. Overall, a sequence of transgressive-regressive facies is recognizable but is strongly overprinted locally by structural complications.

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#### Petrography, Stratigraphy, and Petroleum Potential of Neocomian Missisauga Formation, Sable Island Area, Nova Scotia Shelf

The Canadian Atlantic margin has been an area of active drilling for more than 10 years. On the Scotian Shelf, the total number of wells drilled is now over 70, including several with significant discoveries of gas, wet gas, and light oil.

The Lower Cretaceous (Neocomian) Missisauga Formation of the Sable Island area is composed of coarse clastics of a high-constructive lobate delta system. Sandstones vary from subarkose to volcanic sublitharenite, with rare quartz arenites. They are derived from mixed sedimentary, metamorphic, and igneous basement terranes on the north and northwest. Thickness variations in the clastic sequence are partly controlled by salt diapir growth. Regional marine transgression in the late Neocomian (Barremian) terminated delta progradation.

Well log analysis, binocular and petrographic examination of cutting samples and cores, and stratigraphic map analysis, based on 13 offshore wells in the vicinity of Sable Island have delineated an area in the Missisauga Formation with high petroleum potential compared to that of adjacent areas, on the basis of (1) isopach trends; (2) proximity of good reservoir rocks to mature, marine source beds; (3) maximum sandstone thicknesses and numbers; (4) numerous possibilities of structural and stratigraphic traps; and (5) predominant delta front facies, most productive elsewhere in high-constructive deltas.

Thus, despite earlier indications, from geochemical studies of source rock potential, that prospects for large accumulations of hydrocarbons are only poor to fair, the Sable Island area deserves further attention as an exploration target.

### GULF COAST ASSOCIATION OF GEOLOGICAL SOCIETIES and

GULF COAST SECTION SEPM  
31st Annual Meeting, October 21-23, 1981

Corpus Christi Bayfront Convention Center  
Corpus Christi, Texas  
Host: Corpus Christi Geological Society

#### Technical Session

GCAGS and SEPM-GCS technical sessions are scheduled for Thursday, October 22, following the joint opening session, and for all day Friday, October 23. GCAGS technical sessions will provide papers emphasizing stratigraphy, field studies, structure, and taxation. A symposium entitled "Alternate Energy Sources" dealing with coal and uranium will be conducted concurrently. The SEPM-GCS will present papers of general interest to Gulf Coast geologists. Additional symposiums dealing with carbonates, sandstones, and clays will also be provided. Poster sessions will provide forums for informal discussion of general Gulf Coast geologic problems.

#### Housing

Hotels and beachfront condominiums are available. Reservations must be received by September 30, 1981. All technical

sessions, exhibits, etc will be held at the Corpus Christi Convention Center; hospitality rooms will be at various hotels or condominiums in the immediate vicinity of the Convention Center. Mail your housing reservations form to GCAGS-SEPM-GCS Housing, 430 Wilson Building, Corpus Christi, TX 78476.

#### Registration

The registration area will be in the lobby of the Exhibit Hall at the Bayfront Convention Center. Deadline for pre-registration will be September 15, 1981. On-site registration will begin Wednesday morning and close Friday afternoon.

#### Entertainment

*Wednesday, Sports Events.* Cross Country Run: there will be a four-mile run for both men and women. Trophies will be