

JUN 06 1988

SEGSA

- 1 -

MEMORANDUM FOR: Ronald L. Ballard, Branch Chief  
Technical Review Branch, DHLWM

THRU: Philip S. Justus, Section Leader  
Geology/Geophysics Section, HLTR

FROM: Keith I. McConnell  
Charlotte E. Abrams  
Geology/Geophysics Section, HLTR

SUBJECT: REPORT DESCRIBING ACTIVITIES WHILE ATTENDING THE  
SOUTHEASTERN SECTION OF THE GEOLOGICAL SOCIETY OF  
AMERICA IN COLUMBIA, SC

CONFERENCE SCHEDULE AND ITINERARY:

April 7 - 8: Technical sessions in Columbia, SC (Attachment 1).

PURPOSE OF CONFERENCE:

Our attendance at this conference was required so as to allow us to present two papers:

Evidence of pre-Grenville crust in the Sauratown Mountains anticlinorium western North Carolina: U-Pb studies: by McConnell, Sinha, Hatcher and Heyn.

Metamorphosed felsic to intermediate volcanic rocks and their association with volcanogenic gold deposits in the northern Piedmont of Georgia: by McConnell and Abrams.

In addition, one of us (McConnell) was an invited chairman for an Economic Geology session.

SUMMARY OF PERTINENT POINTS:

Attachment 1 provides a listing of the abstracts presented at this meeting. Those presentations checked were attended by either one or the other of us.

Most of the presentations attended involved tectonic and economic geologic aspects of the southern Appalachians and, therefore, were peripheral to the geology of Yucca Mountain. However, with respect to tectonics, many of the abstracts involved middle crustal aspects of dextral fault motion. Developing a perception of what may be occurring at mid-crustal depths is useful in understanding what may be occurring at depth in the Walker Lane fault zone of central Nevada.

8806090321 880606  
PDR WASTE  
WM-1 DCD

NH18  
delete TLSS  
302  
WM-1

The economic geology presentation by Ririe entitled "Characteristics of rocks with high-alumina minerals associated with gold deposits" used examples from the western United States including the Au/Ag deposit at Goldfield. In the Goldfield example, the author described high Al/Si alteration minerals associated with the deposit there.

The presentations by McConnell and Abrams went very well. Several meeting participants noted that it was nice to know that we were still maintaining participation in professional meetings even though our work at the NRC generally was outside the scope of things discussed.

*151*

Keith I. McConnell  
Geology/Geophysics Section, HLTR

*151*

Charlotte E. Abrams  
Geology/Geophysics Section, HLTR

DISTRIBUTION

Central File  
BYoungblood, HLOB  
CEAbrams, HLTR

NMSS RF  
RBallard, HLTR  
PJustus, HLTR

RBrowning, HLWM  
KMcConnell, HLTR

JBunting, HLSE  
HLTR RF

Attachments:  
As stated

OFC: HLTR	: HLTR	: HLTR	:	:	:	:
NAME: KMcConnell	: C Abrams	: P Justus	:	:	:	:
DATE: 88/06/6	: 88/06/6	: 88/06/6	:	:	:	:

# TECHNICAL SESSIONS

Annual meeting policy prohibits the use of cameras or sound-recording equipment at technical sessions and poster sessions.



A no-smoking policy has been established by the Program Committee and will be followed in all meeting rooms for technical sessions.

## THURSDAY, APRIL 7, 1988

**SYMPOSIUM: GEOSCIENCE ASPECTS OF HAZARDOUS AND RADIOACTIVE WASTE DISPOSAL I**  
Auditorium, USC Law Center, 8:30 A.M.

Ron Hoffer and Vincent Amy, Presiding

OVERVIEW, Stephen E. Stow .....	8:30 A
INTRODUCTION, Ron Hoffer .....	8:40 A
1 Michael T. Ryan*, Vernon T. Ichimura: CURRENT REGULATORY ISSUES IN LOW-LEVEL WASTE [005792] .....	8:45 A
2 Joseph L. Hughart*: AN OVERVIEW OF GEOSCIENCES IN HAZARDOUS WASTE MANAGEMENT [005790] .....	9:05 A
DISCUSSION .....	9:25 A
INTRODUCTION, Vincent Amy .....	9:35 A
3 Gerry L. Stirewalt*: GEOTECHNICAL FACTORS FOR SITING NUCLEAR WASTE DISPOSAL FACILITIES FROM FEDERAL REGULATIONS [005793] .....	9:40 A
4 Nicholas Valkenburg*: HYDROGEOLOGIC CONSIDERATIONS IN MONITORING RADIOACTIVE WASTE DISPOSAL SITES [005795] .....	10:00 A
5 Glenn M. Duffield*, David R. Buss, Dale E. Stephenson: DATA REQUIREMENTS FOR PREDICTIVE GROUND-WATER MODELING [005789] .....	10:20 A
6 David R. Buss*, Glenn M. Duffield, James O. Rumbaugh: A PRACTICAL APPROACH FOR APPLICATION OF MODELS TO HAZARDOUS AND RADIOACTIVE WASTE PROBLEMS [005788] .....	10:40 A
7 Robert E. Broshears*, J. V. Brabana: A RISK ASSESSMENT ALGORITHM FOR HAZARDOUS AND RADIOACTIVE WASTE SITES [005787] .....	11:00 A
8 Edward R. Rothschild*, Brad J. Berggren, Bruce L. Cutright: GEOLOGIC AND HYDROLOGIC CONSIDERATIONS IN THE INVESTIGATION AND REMEDIATION OF HAZARDOUS WASTE DISPOSAL SITES: CASE EXAMPLES [023210] .....	11:20 A
DISCUSSION .....	11:40 A

**SYMPOSIUM: GEOLOGIC SETTING OF THE APPALACHIAN ULTRADEEP CORE HOLE (ADCOH) PROJECT**  
Columbia 3, Radisson Hotel, 8:25 A.M.

Richard T. Williams, Presiding

INTRODUCTION, Richard T. Williams .....	8:25 A
1 C. Coruh*, J. K. Costain, R. D. Hatcher, Jr.: SEISMIC RESPONSES FROM REGIONAL LINES: SITE EVALUATION FOR AN ULTRADEEP APPALACHIAN CORE HOLE [022743] .....	8:30 A

2 John M. Dennison*, William A. Thomas: STRATIGRAPHIC INTERPRETATIONS AND HYDROCARBON IMPLICATIONS OF THRUST SHEETS OF PALEOZOIC STRATA AT THE APPALACHIAN ULTRADEEP CORE HOLE SITE [001797] .....	8:50 A
3 Robert A. Phinney*, Kabir Roy-Chowdhury: STRUCTURE AND ACCRETIONARY HISTORY OF THE SOUTHERN APPALACHIANS AS DETERMINED FROM SEISMIC REFLECTION DATA [015232] .....	9:10 A
4 Richard T. Williams*: STRUCTURE OF THE MIDDLE AND LOWER CRUST BENEATH THE CENTRAL AND SOUTHERN APPALACHIAN MOUNTAINS [007928] ...	9:30 A
COFFEE BREAK .....	9:50 A
5 Steven E. Edelman*, Angang Liu, Robert D. Hatcher, Jr., Janet L. Hopson, Elizabeth A. McClellan, Timothy L. Davis, Alice L. Stieve: CHRONOLOGY OF MAJOR FAULTS IN THE ADCOH (APPALACHIAN ULTRADEEP CORE HOLE) REGION, GEORGIA AND THE CAROLINAS [002313] ....	10:10
6 Margarita Shannon*, Laurie Brown, Art Goldstein: MAGNETIC PROPERTIES OF MYLONITIZED HENDERSON GNEISS: COMPARISONS OF SURFACE AND SUBSURFACE SAMPLES [004461] ....	10:30
7 Paul D. Fullagar*, Steven A. Goldberg: Rb-Sr AND U-Pb GEOCHRONOLOGICAL INVESTIGATIONS IN THE ADCOH SITE AREA, SOUTHERN APPALACHIANS [001799] .....	10:50
8 Janet L. Hopson*: PETROGENESIS OF THE LAKE BURTON MAFIC-ULTRAMAFIC COMPLEX [022453] .....	11:10
9 A. E. Nelson*: STRUCTURE AND CHEMISTRY OF METASEDIMENTARY AND METAVOLCANIC ROCKS OF THE HELEN TERRANE IN THE BLUE RIDGE STRUCTURAL PROVINCE OF NORTHEAST GEORGIA [006058] .....	11:30
DISCUSSION .....	11:50

**SYMPOSIUM: GEOLOGY OF THE SAVANNAH RIVER PLANT AREA, SOUTH CAROLINA AND GEORGIA**  
Columbia 4, Radisson Hotel, 8:25 A.M.

Van Price and David R. Lawrence, Presiding

INTRODUCTION, Van Price .....	8:25
1 E. E. Anderson*, P. Talwani: SEISMOGENIC FEATURES OF THE SAVANNAH RIVER PLANT AREA [003483] .....	8:30
2 J. Maciolek*, E. E. Fritz, R. Wopper, V. Price: MAPPING WITH THE TEM IN THE SAVANNAH RIVER PLANT AREA [003566] .....	8:50

3 Paul G. Nystrom, Jr., Ralph E. Willoughby*, Lucille E. Kite: DISTRIBUTION, LITHOLOGY AND AGE OF SOUTH CAROLINA UPPER COASTAL PLAIN STRATIGRAPHIC UNITS BETWEEN THE SAVANNAH AND WATEREE-SANTEE RIVERS [018627] .....	9:10 A
4 W. C. Fallaw*, P. A. Thayer, V. Price, J. E. Lucas-Clark: PALEOCENE STRATA BENEATH THE SAVANNAH RIVER PLANT, COASTAL PLAIN OF SOUTH CAROLINA [007397] .....	9:30 A
5 J. Lucas-Clark*: SIGNIFICANCE OF THE DISTRIBUTION OF DINOFLAGELLATE ASSEMBLAGES IN THE TYPE ELLENTON FORMATION, SAVANNAH RIVER PLANT: AGE, ENVIRONMENT, OR BOTH? [003560] .....	9:50 A
6 Kathy B. Steele*, Donald J. Colquhoun, Joseph E. Basel: DEPOSITIONAL ENVIRONMENTS IN THE MIDDLE EOCENE ORANGEBURG GROUP, SAVANNAH RIVER PLANT AREA, SOUTH CAROLINA [003553] .....	10:10 A
7 P. A. Thayer*, W. C. Fallaw, V. Price: PETROLOGY AND DIAGENESIS OF EOCENE CARBONATE SEDIMENTS, SAVANNAH RIVER PLANT, SC [003559] .....	10:30 A
8 David R. Lawrence*: MIDDLE AND LATE EOCENE PALEOENVIRONMENTS FROM OUTCROPS NEAR THE SAVANNAH RIVER PLANT [003558] .....	10:50 A
9 Donald J. Colquhoun*: PRE-EARLY MIDDLE MIOCENE AGE FOR SURFICIAL UPPER COASTAL PLAIN CYCLIC STRATIGRAPHIC UNITS IN THE SOUTHEASTERN U.S.A. [003550] .....	11:10 A
10 W. Burleigh Harris*, Victor A. Zullo: PALEOGENE COASTAL ONLAP STRATIGRAPHY OF THE SAVANNAH RIVER REGION, SOUTHEASTERN ATLANTIC COASTAL PLAIN [021433] .....	11:30 A
CONCLUSION .....	11:50 A

**IGNEOUS PETROLOGY**

Columbia 1, Radisson Hotel, 8:25 A.M.

John W. Shervais and Harry Y. McSween, Jr., Presiding

INTRODUCTION, John W. Shervais .....	8:25 A
1 Robert J. Hooper*, Robert D. Hatcher, Jr., Harold E. Stowell: THE GLADESVILLE GABBRO; A COMPOSITE PLUTON FROM THE BERNER MAFIC COMPLEX, CAROLINA TERRANE, CENTRAL GEORGIA [022328] .....	8:30 A
2 P. E. Sacks*, J. W. Shervais, D. T. Secor, Jr., J. H. Wittke, H. D. Maher, Jr.: BURKS MOUNTAIN BELT ULTRAMAFICS: AMPHIBOLITE GEOCHEMISTRY [007010] .....	8:50 A
3 A. J. Dennis*, J. W. Shervais: FIELD RELATIONSHIPS AND GEOCHEMISTRY OF ARC-RELATED MAFIC-ULTRAMAFIC INTRUSIVES IN THE SOUTHERN KINGS MOUNTAIN BELT [007007] .....	9:10 A
4 Suzanne A. Shelley*, John W. Shervais, Donald T. Secor, Jr.: GEOCHEMICAL CHARACTERIZATION OF METAVOLCANIC ROCKS OF THE CAROLINA SLATE BELT, CENTRAL SOUTH CAROLINA [006999] .....	9:30 A
5 James T. Bateson*, James K. Meen, J. Robert Butler: ALKALIC DIKES IN THE CAROLINA SLATE BELT: I. IGNEOUS MINERAL CHEMISTRY [001786] ...	9:50 A
6 James K. Meen*, James T. Bateson, David Wesolowski, J. Robert Butler: ALKALIC DIKES IN THE CAROLINA SLATE BELT: II. EFFECT OF METAMORPHIC ALTERATION ON CHEMICAL AND ISOTOPIC COMPOSITIONS [001800] .....	10:10 A
7 Harry Y. McSween, Jr., Paul D. Fullagar, J. Alexander Speer: CHRONOLOGY, DISTRIBUTION, AND TECTONIC IMPLICATIONS OF PLUTONS IN THE CAROLINAS [002339] .....	10:30 A
8 James H. Wittke*, John W. Shervais, Scott K. Vetter: PETROLOGY AND GEOCHEMISTRY OF THE DUTCHMANS CREEK GABBRO, COLUMBIA, S.C. [007006] .....	10:50 A
9 John W. Shervais*, Scott K. Vetter, James H. Wittke: PETROLOGIC AND GEOCHEMICAL VARIABILITY OF MID-PALEOZOIC GABBROS: THE ROCK HILL, S.C. AND ARROWOOD, N.C., MAFIC-ULTRAMAFIC COMPLEXES [007005] .....	11:10 A
10 M. S. Drummond*, M. J. Defant, J. D. Arthur, P. C. Ragland: PETROGENESIS OF THE BLAKES FERRY PLUTON, ALABAMA APPALACHIANS [015368] ...	11:30 A

**GEOCHEMISTRY**

Columbia 2, Radisson Hotel, 8:25 A.M.

Otto C. Kopp and A. A. Hassanipak, Presiding

INTRODUCTION, Otto C. Kopp .....	8:25 A
1 William E. Jones*, Scott W. Snyder, Leonard C. Moretz, John T. Bray, William J. Showers: TRACE ELEMENT AND STABLE ISOTOPIC TRENDS ASSOCIATED WITH DIAGENESIS OF SELECTED BENTHIC FORAMINIFERS FROM MIOCENE SEDIMENTS [007237] .....	8:30 A
2 Henry Bell III*: SEMIQUANTITATIVE MINERAL ANALYSIS BY X-RAY DIFFRACTION FOR HEAVY MINERAL EXPLORATION PROGRAMS [005907] .....	8:50 A
3 David W. Mohr*: CHEMICAL MICROVARIATION WITHIN MUSCOVITE: USE OF COMPUTER-GENERATED "DATA SETS" TO ESTIMATE NATURE AND EXTENT OF INDETERMINATE ERRORS OF ANALYSIS AND REAL VARIATION IN MINERAL COMPOSITION [004972] .....	9:10 A
4 K. D. Street, W. E. Sharp*: THE GEOLOGICAL ORIGIN OF VARIATION IN POTASSIUM GAMMA AERORADIOACTIVITY OF THE SPARTANBURG NTMS SHEET, SOUTH CAROLINA [003584] .....	9:30 A
5 A. A. Hassanipak*, J. M. Wampler: RADIOGENIC ARGON RELEASED BY STEPWISE HEATING OF ILLITIC AND GLAUCONITIC CLAY SAMPLES: A POSSIBLE BASIS FOR INTERPRETATION OF MIXED AGES [018600] .....	9:50 A
6 Leonard C. Moretz, Scott W. Snyder*, John T. Bray: RECRYSTALLIZATION, MINERALIZATION AND DIAGENETICALLY INDUCED GEOCHEMICAL CHANGE IN BENTHIC FORAMINIFERS FROM MIOCENE SEDIMENTS OF THE NORTH CAROLINA CONTINENTAL SHELF [007238] .....	10:10 A
7 A. E. Gates, L. C. S. Gundersen*: SOIL RADON AS A FUNCTION OF SHEAR STRAIN IN THE BROOKNEAL ZONE, VA [005242] .....	10:30 A
8 C. Michael Leshner*, Nathan L. Green: SYN-METAMORPHIC HYDROTHERMAL ALTERATION, HOG MOUNTAIN GOLD DEPOSIT, NORTHERN ALABAMA PIEDMONT [015375] .....	10:50 A
9 Ayhan Erler*, Adnan Aydin, Levent Yener, Ali Saran: MASSIVE SULFIDE DEPOSITS OF THE SOUTHEASTERN ANATOLIAN THRUST BELT, TURKEY [007390] .....	11:10 A
10 O. C. Kopp, D. K. Reeves*: A PRELIMINARY STUDY OF THE TRACE ELEMENT GEOCHEMISTRY OF BRECCIA CLASTS AND GANGUE CARBONATES IN MISSISSIPPI VALLEY-TYPE ORE DEPOSITS USING SYNCHROTRON RADIATION [002325] .....	11:30 A

**STRATIGRAPHY I: APPALACHIAN BASIN**

Columbia 5 & 6, Radisson Hotel, 8:25 A.M.

Edward L. Simpson and Richard J. Diecchio, Presiding

INTRODUCTION, Edward L. Simpson .....	8:25 A
1 Raphael Unrug*, David L. Lepain: CARBONATE OLISTOLITHS IN THE OCOEE SERIES: IMPLICATIONS FOR NORTH AMERICAN CRATON MARGIN EVOLUTION [004949] .....	8:30 A
2 E. L. Simpson*, K. A. Eriksson: DISTAL ALLUVIAL FAN TO OUTER SHELF SEDIMENTATION WITHIN THE LATE PROTEROZOIC TO EARLY CAMBRIAN UNICOI AND LOWER HAMPTON FORMATIONS, SOUTHERN AND CENTRAL VIRGINIA [022707] .....	8:50 A
3 W. Edward Osborne*: THICKNESS VARIATIONS, FACIES DISTRIBUTION, AND TECTONIC FRAMEWORK OF DEPOSITION OF THE MIDDLE AND UPPER CAMBRIAN CONASAUGA FORMATION AND EQUIVALENT UNITS, APPALACHIAN FOLD AND THRUST BELT, ALABAMA [001363] .....	9:10 A
4 Keith E. Roberson*, D. J. Benson, K. R. Walker: STRATIGRAPHIC EVIDENCE FOR LATE EARLY ORDOVICIAN SHELF DEFORMATION IN THE ALABAMA APPALACHIANS [002342] .....	9:30 A
5 E. Lynn Zeigler*, Pamela J. W. Gore: SEDIMENTARY PETROLOGY AND DEPOSITIONAL SETTING OF THE UPPER ORDOVICIAN SEQUATCHIE AND LOWER SILURIAN RED MOUNTAIN FORMATIONS, NORTHWEST GEORGIA [015276] .....	9:50 A
6 Ata Ur Rahman*: LITHOSTRATIGRAPHY AND REEF POTENTIAL OF SILURIAN ROCKS IN THE ILLINOIS BASIN, WESTERN KENTUCKY [007089] .....	10:10 A
7 Michael A. Gibson*, Craig E. Clement, Thomas W. Broadhead: REGIONAL STRATIGRAPHY AND PALEO GEOGRAPHIC SETTING FOR THE ROSS FORMATION (LOWER DEVONIAN), WEST-CENTRAL TENNESSEE [002318] .....	10:30 A

- 8 John M. Dennison, Sharon M. Barrell, Andrew G. Warne\*: EXTENSION OF ALLEGHENY FRONT UPPER DEVONIAN STRATIGRAPHIC DIVISIONS EASTWARD TO VIRGINIA [001787] ..... 10:50 A
- 9 William R. Chapman\*, Howard Randall Feldman, Christopher G. Maples: STORM DOMINATED, SHOALING-UPWARD SEQUENCES IN THE BANGOR LIMESTONE (MISSISSIPPIAN; CHESTERIAN), MORGAN COUNTY, ALABAMA [003297] ..... 11:10 A
- 10 Richard J. Diecchio\*: ORIGIN OF APPALACHIAN SYNCLINORIA AS SEDIMENTARY BASINS - POSSIBILITIES FOR THE PIEDMONT AND BLUE RIDGE [018733] ..... 11:30 A

**POSTER SESSION I: APPALACHIAN STRUCTURAL GEOLOGY**  
Assembly 2, Radisson Hotel, 8:00 A.M. - 12:00 Noon

Authors will be present from 8:30 to 11:30 A.M.

- Nasr-Aldean Widatalla\*, F. A. Wilson: FIELD AND ZIRCON STUDY OF WISSAHICKON FM. AND GEORGETOWN COMPLEX GRANITIC ROCKS, ROCK CREEK PK., WASHINGTON, D.C. [019719] ..... Booth 1
- Tamera J. Hill\*: REINTERPRETATION OF "HIGH ANGLE" FAULTS IN CENTRAL PAGE VALLEY, PAGE COUNTY, VIRGINIA [014798] ..... Booth 2
- E. Brett Waller\*, Mark A. Corbin: A GEOLOGICAL AND GEOPHYSICAL STUDY ACROSS AN ALLEGHANIAN(?) SHEAR ZONE, CENTRAL BRUNSWICK COUNTY, VIRGINIA [014801] ..... Booth 3
- Robert A. Baird\*: SHEAR ZONE GEOMETRY IN PREVIOUSLY FOLIATED ROCKS - AN EXAMPLE FROM THE CLOVER SHEAR ZONE, SOUTH CENTRAL VA [015085] ..... Booth 4
- Gary C. Allen\*, Robert Frischherts: GEOLOGY AND STRUCTURAL DEVELOPMENT OF THE LAKE TOXAWAY AREA, NORTH CAROLINA [018150] ..... Booth 5
- Barbara S. Christian\*, Andy R. Bobyarchick: PHYSICAL GEOLOGY FIELD TRIPS AT AN URBAN UNIVERSITY [001297] ..... Booth 6
- Michael W. Higgins\*, R. P. Crawford III, Arthur E. Nelson, T. J. Crawford: THE TALKING ROCK COMPLEX: AN ANCIENT ACCRETIONARY COMPLEX, NORTHERN GEORGIA AND SOUTHERN NORTH CAROLINA [007293] ..... Booth 7
- Malcolm F. Schaeffer\*, Francis J. Hagye, Robert E. Bryant, Donald E. Orr, Jr., Ronald D. Birch: DETAILED GEOLOGIC MAPPING OF UNDERGROUND FACILITIES AT BAD CREEK PUMPED STORAGE PROJECT, NORTHWESTERN SOUTH CAROLINA [001189] .. Booth 8
- David B. Bieler\*: PRELIMINARY GRAVITY MAP OF PART OF THE TALLAPOOSA BLOCK IN THE VICINITY OF HOG MOUNTAIN, EAST CENTRAL ALABAMA [015500] ..... Booth 9
- Lawrence J. Rheams\*, W. Edward Osborne, Robert L. Barnett: THE ABERNANT CULMINATION OF THE BLUE CREEK ANTICLINE [017699] ..... Booth 10

**IGNEOUS AND METAMORPHIC PETROLOGY**  
Columbia 1, Radisson Hotel, 1:25 P.M.

- Paul C. Ragland and James O. Eckert, Jr., Presiding
- INTRODUCTION, James O. Eckert, Jr. .... 1:25 P
- 1 Roger B. Durham\*, Paul C. Ragland, James P. Tull: FELSIC UNITS IN THE HILLABEE GREENSTONE, ALABAMA APPALACHIANS: EVIDENCE FOR PYROCLASTIC ORIGIN [120802] ..... 1:30 P
- 2 Kula C. Misra\*, J. A. Conte: AMPHIBOLITES OF THE ASHE AND ALLIGATOR BACK FORMATIONS, WESTERN NORTH CAROLINA: A COMPLEX SUITE OF METABASALTS FORMED IN A RIFT ENVIRONMENT [002315] ..... 1:50 P
- 3 Richard L. Mauger\*: GEOCHEMICAL EVIDENCE FOR SEDIMENT RECYCLING FROM NORTH CAROLINA MINNETTES [021442] ..... 2:10 P
- 4 Jonathan D. Arthur\*, Paul C. Ragland, Don R. Harris: EARLY MESOZOIC THOLEIITIC ROCKS FROM THE SUBSURFACE OF FLORIDA [021262] ..... 2:30 P
- 5 Yuequn Jin\*, Lawrence A. Taylor: METASOMATIC PARTIAL MELTING OF CLINOPYROXENE IN SPINEL LHERZOLITE KENOLITHS IN ALKALI BASALTS FROM EASTERN CHINA [002307] ..... 2:50 P
- 6 Lawrence A. Taylor\*, Clive R. Neal: ISOTOPE/REE SIGNATURES OF SUBDUCTED CRUST WITHIN THE MANTLE [002304] ..... 3:10 P
- 7 Clive R. Neal\*: IS METASOMATISM A PREREQUISITE FOR, OR A CONSEQUENCE OF, ALKALIC MANTLE MAGMATISM? A CASE STUDY OF THE MALAITAN ALNOITE, SOLOMON ISLANDS [002306] ..... 3:30 P
- 8 James O. Eckert, Jr., David W. Mohr: CONDITIONS IN THE METAMORPHIC TRANSITION FROM THE STAUROLITE-KYANITE ZONE TO THE HORNBLENDE GRANULITE FACIES CORE NEAR FRANKLIN, NORTH CAROLINA: PETROLOGIC EVIDENCE FOR A CONTINUOUS PALEOZOIC PROGRESSION [005408] ..... 3:50 P
- 9 Daniel E. Linder\*, Ann G. Wylie: ZEOLITES FROM THE PALEOZOIC, METAVOLCANIC JAMES RUN FORMATION, PIEDMONT PROVINCE, MARYLAND [023372] ..... 4:10 P
- 10 Loren A. Raymond\*, L. E. Leatherman, K. Vance, T. Cook, R. W. Abbott: THE GREER HOLLOW ULTRAMAFIC BODY, EASTERN BLUE RIDGE PROVINCE, NORTH CAROLINA: PETROGRAPHY, FIELD RELATIONS, AND IMPLICATIONS FOR METAMORPHIC HISTORY OF THE BLUE RIDGE PROVINCE [015176] ..... 4:30 P
- 11 Thomas L. Seal\*: BIOTITE-GARNET THERMOMETRY AND BIOTITE MINERAL CHEMISTRY OF PELITIC GNEISSES OF THE ADIRONDACK LOWLANDS AND SOUTHWESTERN HIGHLANDS, NEW YORK [015306] ..... 4:50 P

**MICROPALAEONTOLOGY**  
Columbia 2, Radisson Hotel, 1:25 P.M.

- Douglas F. Williams and Richard A. Laws, Presiding
- INTRODUCTION, Richard A. Laws ..... 1:25 :
- 1 Douglas F. Williams\*, Dwight M. Trainor: O-18 EVIDENCE FOR SURFACE WATER SALINITY CHANGES IN THE GULF OF MEXICO DURING THE LAST 6 MILLION YEARS [007665] ..... 1:30 :
- 2 Dwight M. Trainor\*: SPECTRAL CHARACTER OF THE PLIO-PLAISTOCENE CLIMATE RECORD AS RECORDED IN THE OXYGEN AND CARBON ISOTOPIC COMPOSITION OF FORAMINIFERA RECOVERED FROM DEEP-SEA SEDIMENTS [021499] ..... 1:50
- 3 Howard J. Spero\*, Charles E. Cline, William Barrett: MORPHOLOGY AND STABLE ISOTOPES: CAN WE EXTRACT ADDITIONAL PALEOENVIRONMENTAL INFORMATION FROM FORAMINIFERAL SHELLS? [007662] ..... 2:10
- 4 Anthony C. Gary\*, Robert Ehrlich, Nancy Healy-Williams: THE PALEOENVIRONMENTAL SIGNIFICANCE OF TEST SHAPE IN BOLIVINA ALBATROSSI [021451] ..... 2:30
- 5 Erin A. Healy\*: HYDROLOGICAL INFLUENCE ON MORPHOLOGY OF LIVING PLANKTONIC FORAMINIFERA NEOGLOBOCADRINA PACHYDERMA FROM THE SOUTH ATLANTIC SECTOR OF THE SOUTHERN OCEAN [007666] ..... 2:50
- 6 Charles E. Cline\*, Howard J. Spero: ECOLOGICAL EFFECTS ON THE MORPHOLOGY OF ORBULINA UNIVERSA: EVIDENCE FROM THE PLANKTON [007663] ..... 3:10

**SYMPOSIUM: GEOSCIENCE ASPECTS OF HAZARDOUS AND RADIOACTIVE WASTE DISPOSAL II**  
Auditorium, USC Law Center, 1:30 P.M.

Stephen H. Stow and Steven Schamel, Presiding

- INTRODUCTION, Stephen H. Stow ..... 1:30 P
- 1 Sam B. Upchurch\*: CHEMICAL DATA NEEDS AND AVAILABILITY FOR SITING AND MANAGING HAZARDOUS- AND RADIOACTIVE-WASTE DISPOSAL SITES [005772] ..... 1:35 P
- 2 Gary K. Jacobs\*: LABORATORY TESTS IN SUPPORT OF WASTE MANAGEMENT: CAN BOTH SCIENTIFIC AND REGULATORY NEEDS BE SERVED? [005786] ..... 1:55 P
- 3 Vijay S. Tripathi\*, G. T. Yeh: CHALLENGES AND PITFALLS IN THE APPLICATION OF GEOCHEMICAL MODELS [005784] ..... 2:15 P
- DISCUSSION ..... 2:35 P
- INTRODUCTION, Steven Schamel ..... 2:55 P
- 4 Robert Lanonica\*: THE ABILITY OF THE GEOLOGICAL COMMUNITY TO MEET THE REGULATORY REQUIREMENTS FOR HAZARDOUS WASTE MANAGEMENT [005783] ..... 3:00 P
- 5 S. H. Stow\*: PERSPECTIVES OF EDUCATION AND COMMUNICATION: FROM COLLEGE TO CONGRESS, ARE THE GEOSCIENCES RESPONDING TO WASTE-MANAGEMENT NEEDS? [005775] ..... 3:20 P
- FORUM, Steven Schamel ..... 3:40 P

7 Lee Monts\*: LATE OLIGOCENE THROUGH QUATERNARY SHAPE CHANGES IN THE LONG-RANGING BENTHIC FORAMINIFERAL SPECIES EPISTOMINELLA EXIGUA AND GLOBOCASSIDULINA SUBGLOBOSA [007660] ..... 3:30 P

8 Richard A. Laws\*: UPPER CLAIORNIAN-JACKSONIAN CALCAREOUS NANNOFOSSILS FROM THE SAVANNAH AND SANTEE BASINS [021471] ..... 3:50 P

9 Im C. Shin\*: DISTRIBUTION OF HOLOCENE BENTHIC FORAMINIFERA IN THE SOUTHEAST VENEZUELA BASIN, CARIBBEAN SEA [014878] ..... 4:10 P

10 Thomas F. Guilderson\*, Michael W. Howell: PLANKTONIC AND BENTHIC FORAMINIFERAL BIOFACIES ASSOCIATED WITH THE BENESTARE IDATOMITE, CALABRIA, SOUTHERN ITALY [021452] ..... 4:30 P

**BLUE RIDGE PROVINCE: STRUCTURE AND TECTONICS**  
Columbia 3, Radisson Hotel, 1:25 P.M.

Alice L. Stieve and John O. Costello, Presiding

INTRODUCTION, John O. Costello ..... 1:25 P

1 Douglas W. Rankin\*: THE JEFFERSON TERRANE OF THE BLUE RIDGE TECTONIC PROVINCE: AN EXOTIC ACCRETIONARY PRISM [021586] ..... 1:30 P

2 Patricia A. Campbell\*, Thomas H. Anderson: DEFORMATION AND METAMORPHISM IN THE BLUE-RIDGE BASEMENT COMPLEX, VIRGINIA [016006] ..... 1:50 P

3 Christopher M. Dail\*: EVIDENCE FOR POLYPHASE DEFORMATION AND METAMORPHISM IN THE LATE PRECAMBRIAN(?) ALLIGATOR BACK FORMATION, SOUTHWESTERN VIRGINIA BLUE RIDGE [014802] ..... 2:10 P

4 K. I. McConnell\*, A. K. Sinha, R. D. Hatcher, Jr., T. Heyn: EVIDENCE OF PRE-GRENVILLE CRUST IN THE SAURATOWN MOUNTAINS ANTICLINORIUM, WESTERN NORTH CAROLINA: U-Pb ISOTOPIC STUDIES [002790] ..... 2:30 P

5 A. L. Stieve\*, K. Sinha, R. D. Hatcher, Jr.: Rb/Sr WHOLE ROCK GRENVILLE AGE FOR THE BASEMENT GNEISSES OF TALLULAH FALLS DOME, NORTHEASTERN GEORGIA [003523] ..... 2:50 P

6 Mark S. Groszok\*, James F. Tull: PROBLEMATIC LITHOFACIES IN THE WESTERN BLUE RIDGE OF NORTHERN GEORGIA [018581] ..... 3:10 P

7 M. W. Higgins\*, R. F. Crawford III, T. J. Crawford, C. W. Cressler: THE MURPHY FAULT ZONE, CORBIN AND COHUTTA MASSIFS, AND TALKING ROCK ACCRETIONARY COMPLEX, AND THE GEOLOGIC FRAMEWORK OF NORTHERN GEORGIA AND SOUTHERN NORTH CAROLINA [007291] ..... 3:30 P

8 George F. Heuler\*, James F. Tull: AGE AND CORRELATION OF THE TALLADEGA BELT IN GEORGIA [018579] ..... 3:50 P

9 John O. Costello\*: GEOLOGY OF THE SOUTHERN APPALACHIAN OROGENIC FRONT BETWEEN CARTERSVILLE, GEORGIA, AND RELIANCE, TENNESSEE: A REPORT OF WORK IN PROGRESS [005900] ..... 4:10 P

10 A. A. El-Makhrouf\*, P. D. Fullagar: Sr ISOTOPIC GEOCHEMISTRY OF POST-TECTONIC GRANITES OF THE TIBESTI MASSIF, SOUTHERN LIBYA: EVIDENCE FOR CRUSTAL ACCRETION ~1000Ma AGO IN NORTHERN AFRICA [001795] ..... 4:30 P

**STRATIGRAPHY II: ATLANTIC AND GULF COASTAL PLAIN**  
Columbia 4, Radisson Hotel, 1:25 P.M.

Lauck W. Ward and Lucy McCartan, Presiding

INTRODUCTION, Lauck W. Ward ..... 1:25 P

1 Patricia E. Gallagher\*, Charles W. Hoffman: NEW OUTCROP OF UPPER CRETACEOUS BLACK CREEK FORMATION, JOHNSTON COUNTY, NORTH CAROLINA [005328] ..... 1:30 P

2 Ira Holston\*, David T. King, Jr., Enid Bittner: THE SELMA CHALK AQUICLUDE -- BASEMENT-RELATED FRACTURE SYSTEMS AND STRATIGRAPHY OF FRACTURE-BEARING CHALKY MARL FACIES AND POROUS SANDY BEDS [018524] ..... 1:50 P

3 Ernest A. Mancini\*, Berry H. Tew: APPLICATION OF SEQUENCE STRATIGRAPHIC CONCEPTS IN RECOGNIZING THE WILCOX-MIDWAY BOUNDARY IN THE EASTERN GULF COASTAL PLAIN [004264] ..... 2:10 P

4 H. L. Webb\*, J. L. Harrison, S. M. Pickering: ARE EAST-CENTRAL GEORGIA TERTIARY KAOLINS REWORKED CRETACEOUS KAOLINS? [022450] ..... 2:30 P

5 Lucille E. Kite\*: STRATIGRAPHY OF THE CRETACEOUS-TERTIARY HIGHLANDS IN CENTRAL SOUTH CAROLINA [001432] ..... 2:50 P

6 Kenneth M. Skinner\*, Joan M. Spaw, Connie S. Cigler: EFFECTS OF CRUSTAL SUBSIDENCE AND EUSTATIC SEA-LEVEL CHANGES ON THE SEDIMENTARY SUCCESSION UNDERLYING THE SAVANNAH RIVER PLANT NEAR AIKEN, SOUTH CAROLINA [007051] ..... 3:10 P

7 L. McCartan\*, J. M. Wilson, L. M. Bybell, G. W. Andrews, G. J. Brenner: TIME STRATIGRAPHIC SEQUENCES (CRETACEOUS TO MIOCENE) IN A CORE FROM WALDORF, MARYLAND [006004] ..... 3:30 P

8 Scott A. McClelland\*, Donald J. Colquhoun: SURFACE/SUBSURFACE STRATIGRAPHY FROM SOUTHERN RICHMOND COUNTY, GA, THROUGH BURKE COUNTY, GA [003551] ..... 3:50 P

9 Paul D. Fullagar\*, W. Burleigh Harris: MIDDLE EOCENE BENTONITE AND GLAUCONITE FROM THE ATLANTIC COASTAL PLAIN, NORTH CAROLINA: COMPARISON OF RADIOMETRIC AGES [021434] ..... 4:10 P

10 Lauck W. Ward\*, David T. Dockery: STRATIGRAPHIC IMPLICATIONS OF THE MOLLUSCAN ASSEMBLAGE COLLECTED BY EARLE SLOAN ALONG McBEAN CREEK, BURKE COUNTY, GEORGIA [003519] ..... 4:30 P

11 Gerald R. Baum, Berry H. Tew\*, Ernest A. Mancini, Peter R. Thompson, David K. Goodman: EOCENE AND OLIGOCENE SUBSURFACE STRATIGRAPHY OF CENTRAL BALDWIN COUNTY, ALABAMA [022371] ..... 4:50 P

12 Paul G. Nystrom, Jr., Lucille E. Kite: THE PINEHURST FORMATION IN SOUTH CAROLINA [018629] ..... 5:10 P

**SEDIMENTOLOGY AND GEOMORPHOLOGY I: TERRESTRIAL**  
Columbia 5 & 6, Radisson Hotel, 1:25 P.M.

Danny W. Harrelson and Pamela J. W. Gore, Presiding

INTRODUCTION, Pamela J. W. Gore ..... 1:25 P

1 Frank E. Farmer\*, Howard Randall Feldman, John R. Wagner: ANCIENT BRAIDED STREAM DEPOSITS FROM NORTHWESTERN SOUTH CAROLINA [007161] ..... 1:30 P

2 Danny W. Harrelson\*, Lawson M. Smith: THERMOLUMINESCENCE AGE DATES FROM A RED RIVER TERRACE SEQUENCE, RED RIVER PARISH, LOUISIANA [001170] ..... 1:50 P

3 G. Richard Whittecar\*: COLLUVIUM AND ALLUVIUM IN TERRACES AND DEBRIS-FILLED HOLLOWS, WESTERN NORTH CAROLINA PIEDMONT [020681] ..... 2:10 P

4 Hi-Il Yi\*: A MODEL OF MARSH DEVELOPMENT OF THE MISSISSIPPI DELTA LOBES, LOUISIANA [014877] ..... 2:30 P

5 David S. Felton\*, Robert A. Gastaldo: GENESIS AND DEVELOPMENT OF CREVASSE SPLAYS IN THE MOBILE-TENSAW RIVER DELTA [022400] ..... 2:50 P

6 B. W. Miller\*, O. C. Kopp: A FIELD, PETROLOGIC, AND GEOCHEMICAL STUDY OF THE JELlico COAL SEAM IN THE NORTHEASTERN PORTION OF THE TENNESSEE COAL BELT [002328] ..... 3:10 P

7 Walter L. O'Niell\*: DEPOSITIONAL MODEL FOR LIGNITE OCCURRENCE IN THE WILCOX GROUP OF SOUTH-CENTRAL MISSISSIPPI [023439] ..... 3:30 P

8 Susan C. Roberts\*, Pamela J. W. Gore: SEDIMENTARY FEATURES AND FOSSIL DISTRIBUTION IN AN EARLY JURASSIC TRANSGRESSIVE-REGRESSIVE LACUSTRINE SEQUENCE IN VIRGINIA [018605] ..... 3:50 P

9 Kenneth W. Kuehn\*, W. Stanley Wilkerson: AGE AND ORIGIN OF MURPHY'S POND, HICKMAN COUNTY, KENTUCKY [023466] ..... 4:10 P

10 Hugh H. Mills\*: CAPROCK CONTROL OF HOLLOW FORM AND PROCESS IN THE VALLEY AND RIDGE PROVINCE, SOUTHWESTERN VIRGINIA [015618] ..... 4:30 P

**POSTER SESSION II: PALEONTOLOGY, SEDIMENTARY PETROLOGY, GEOLOGICAL EDUCATION, REMOTE SENSING**  
Assembly 2, Radisson Hotel, 1:30 P.M. - 5:30 P.M.

Authors will be present from 2:00 to 5:00 P.M.

Frank K. McKinney*, James F. Tull, Connie B. Garrett: ARCHAEOCYATHA DISCOVERY IN THE BASAL CARBONATE UNIT OF THE TALLADEGA SLATE BELT, ALABAMA, CONFIRMS CORRELATION WITH THE SHADY DOLOMITE [015309] .....	Booth 1
Brian Meyer*, JoAnne Shadrout*: VIDEO DOCUMENTATION OF THE COLLECTION AND EXHIBITION OF GEORGIA SOUTHERN'S MOSASAUR FROM THE UPPER CRETACEOUS PIERRE SHALE OF SOUTH DAKOTA [015286] .....	Booth 2
Lawrence J. Poppe*, William P. Dillon: PETROLOGY OF THE PALEOZOIC STRATA IN THE TRANSCO 1005-1 WELL, SOUTHEASTERN U.S. OUTER CONTINENTAL SHELF [014979] .....	Booth 3
Dorothy E. Raymond*, Lawrence J. Rheams: COMPOSITIONAL VARIATIONS IN SANDSTONES OF THE POTTSVILLE FORMATION IN THE JASPER QUADRANGLE, ALABAMA [001362] .....	Booth 4
D. Joe Benson*: DIAGENETIC HISTORY OF THE SMACKOVER FORMATION IN SOUTHWEST ALABAMA [015376] .....	Booth 5
J. Lincoln Foreman*, L. J. Weber, K. R. Walker: DIAGENETIC PATTERNS IN A LATE CAMERIAN OOLITE SHOAL, NOLICHUCKY FORMATION, EAST TENNESSEE [002340] .....	Booth 6
Fredrick deS. Siewers*: THE OCCURRENCE AND PETROGRAPHIC CHARACTERISTICS OF HARDGROUNDS FROM THE MIDDLE ORDOVICIAN LEBANON LIMESTONE, CENTRAL BASIN, TENNESSEE [022438] .....	Booth 7
John R. Wagner*, James T. Ligon, William P. Steiner, Jr.: EROSION AND LAND MANAGEMENT IN UPSTATE SOUTH CAROLINA; COMMON GROUND FOR INTERDISCIPLINARY STUDY [007166] .....	Booth 8
John R. Monrad*, Douglas W. Reynolds: EVOLUTION OF THE EARTH: REACHING THE NON-SCIENCE MAJOR [007448] .....	Booth 9
Alba Payas, R. G. Schmidt*, Pablo Gumiel, Carmen Anton-Pacheco, M. J. Kingston, W. M. Milton, L. C. Rowan: USE OF LANDSAT DATA IN GOLD EXPLORATION IN THE CAROLINA SLATE BELT [005903] .....	Booth 10

## FRIDAY, APRIL 8, 1988

### SYMPOSIUM: GEOPHYSICS OF BURIED EARLY MESOZOIC RIFT BASINS

Columbia 4, Radisson Hotel, 8:25 A.M.

William A. Smith and John H. McBride, Presiding

INTRODUCTION, William A. Smith .....	8:25 A
1 J. K. Costain*, C. Coruh: REFLECTION SEISMIC SIGNATURES OF ONSHORE BURIED MESOZOIC BASINS IN EASTERN NORTH AMERICA [015088] .....	8:30 A
2 Charles G. James, Jr.*, Ali A. Nowroozi: INTERPRETATION OF GRAVITY AND MAGNETIC ANOMALIES OF THE FARMVILLE TRIASSIC BASIN, SOUTH-CENTRAL VIRGINIA [018703] .....	8:50 A
3 John H. McBride*: SEISMIC REFLECTION STRUCTURE OF THE SOUTH GEORGIA RIFT [005260] .....	9:10 A
4 Dale E. Stephenson*, William L. Chapman: STRUCTURE ASSOCIATED WITH THE BURIED DUNBARTON BASIN, SC, FROM RECENT SEISMIC DATA [003481] .....	9:30 A
5 John C. Behrendt*, K. D. Klitgord, D. R. Hutchinson: REACTIVATED BOUNDARY FAULT ZONES OF BURIED EARLY MESOZOIC BASINS AS POSSIBLE SOURCES OF SEISMICITY IN THE CHARLESTON, S.C. REGION [005249] .....	9:50 A
6 Jeffrey D. Phillips*: BURIED STRUCTURES AT THE NORTHERN END OF THE EARLY MESOZOIC SOUTH GEORGIA BASIN, SOUTH CAROLINA, AS INTERPRETED FROM AEROMAGNETIC AND GRAVITY DATA [006062] .....	10:10 A
7 K. M. Shedlock*, S. T. Harding: STRUCTURE OF THE SHALLOW CRUST NEAR CHARLESTON, SOUTH CAROLINA [003552] .....	10:30 A
8 A. Nuthanna*, P. Talwani, D. J. Colquhoun: AN INTEGRATED STRATIGRAPHIC AND GEOPHYSICAL STUDY OF THE CENTRAL SOUTH CAROLINA COASTAL PLAIN [003480] .....	10:50 A
9 K. G. Smith, F. D. Foley*: GEOPHYSICAL EVIDENCE FOR A DEEP DIABASE INTRUSION TRIASSIC BASIN - COLLETON AND BAMBERG COUNTIES, SOUTH CAROLINA [003489] .....	11:10 A

10 W. A. Smith*, P. Talwani: AN INTEGRATED STUDY OF THE NORTHERN FLANK OF A BURIED MESOZOIC RIFT BASIN, SOUTH CAROLINA [003488] .....	11:30 A
CONCLUSION, John H. McBride .....	11:50 A

### SYMPOSIUM: MESOZOIC-CENOZOIC BIOGEOGRAPHY

Columbia 5 & 6, Radisson Hotel, 8:25 A.M.

Ralph H. Willoughby and Joseph G. Carter, Presiding	
INTRODUCTION, Ralph H. Willoughby .....	8:25 A
1 Michael L. McKinney, Jennifer Jett*: BIOGEOGRAPHY OF MESOZOIC AND CENOZOIC MASS EXTINCTIONS [022475] .....	8:30 A
2 Gale A. Bishop*: NORTH AMERICAN CRETACEOUS DECAPOD COMMUNITY STRUCTURE AND EVOLUTION [004237] .....	8:50 A
3 David R. Schwimmer*: LATE CRETACEOUS DINOSAURS FROM THE GEORGIA-ALABAMA BORDER REGION AND THEIR BIOGEOGRAPHIC RELATIONSHIP WITH WESTERN INTERIOR LOWLAND ASSEMBLAGES [015302] .....	9:10 A
4 C. F. Koch*: ON D'ORBIGNY AND SOME NORTH AMERICAN UPPER CRETACEOUS BIVALVE SPECIES [003583] .....	9:30 A
5 Jonathan R. Bryan*, Douglas S. Jones: SHALLOW MARINE CRETACEOUS-TERTIARY MACROFAUNAL TRANSITION IN CENTRAL ALABAMA [002309] .....	9:50 A
6 David T. Dockery III*: THE INFLUENCE OF THE ANCIENT GULF STREAM ON PALEOGENE MOLLUSCAN PROVINCES IN THE NORTHERN GULF AND ATLANTIC COASTAL PLAINS [017670] .....	10:10 A
7 Victor A. Zullo*: BIOGEOGRAPHY OF THE CENOZOIC BALANOID BARNACLE FAUNA OF THE SOUTHEASTERN ATLANTIC REGION [015166] .....	10:30 A
8 Paul F. Huddleston*, Muriel E. Hunter, Burt D. Carter: THE SUWANEE STRAIT AS A FAUNAL PROVINCE BOUNDARY [017745] .....	10:50 A
9 Lyle D. Campbell*: A HISTORICAL OVERVIEW OF BIOGEOGRAPHICAL STUDIES OF MOLLUSCAN FAUNAS IN THE MARINE NEOGENE OF EASTERN NORTH AMERICA [001434] .....	11:10 A
10 Lauck W. Ward*: LATE PLIOCENE MOLLUSCAN BIOGEOGRAPHY OF THE ATLANTIC COASTAL PLAIN [006056] .....	11:30 A
CONCLUSION, Joseph G. Carter .....	11:50 A

### MARINE GEOLOGY

Columbia 1, Radisson Hotel, 8:25 A.M.

Marilyn P. Segall and Peter Popenoe, Presiding

INTRODUCTION, Peter Popenoe .....	8:25 A
1 M. P. Segall*, S. A. Kuehl, M. W. Sanford, M. Gipson, Jr., C. A. Nittrouer: CLAY-SIZE MINERALS OF THE WILMINGTON CANYON SYSTEM: INDICATORS OF SOURCES AND MODERN SEDIMENTARY PROCESSES [003506] .....	8:30 A
2 Peter Popenoe*, William P. Dillon, Frank T. Manheim: GLORIA SIDESCAN SONAR IMAGES OF THE NORTHERN BLAKE PLATEAU THAT DEPICT AREAS OF MANGANESE-PROSPHORITE PAVEMENTS AND NODULES [014980] .....	8:50 A
3 Mead A. Allison*, Stanley R. Riggs: DISTRIBUTION PATTERNS AND ENVIRONMENTAL CONTROLS ON CLAY SEDIMENTATION IN THE MIOCENE PUNGO RIVER FM., NORTH CAROLINA CONTINENTAL MARGIN [015154] .....	9:10 A
4 Ronald Gamble*, Dwight Trainor, Jeffrey Corbin: CALCIUM CARBONATE PRESERVATION ON THE MARGIN OF THE NORTHERN GULF OF MEXICO [007671] .....	9:30 A
5 Wayne C. Isphording, Audie C. Waters, Sheri M. George*: BOTTOM SEDIMENT TEXTURES AND HEAVY METAL CONTAMINATION IN GULF COAST BAYS AND ESTUARIES [018527] .....	9:50 A
6 A. W. Shultz*, W. W. Schroeder, P. Fleischer: DISTRIBUTION AND COMPOSITION OF HARDBOTTOMS, NORTH-CENTRAL GULF OF MEXICO [022356] .....	10:10 A
7 M. S. Abu-Jaber*, M. M. Kimberley, J. A. Monette: MARINE DISPERSAL OF SUSPENDED SILT IN THE ORINOCO PLUME BY TREE ROOTLETS: WAS SILT DISPERSAL FROM DELTAS DIFFERENT BEFORE TREES APPEARED ON EARTH? [001345] .....	10:30 A

Dt vent creek greis

- 8 Michael M. Kimberley, Tony P. Schrader\*: HOLOCENE GLAUCONITIC GRAINS ON THE SHALLOW NEARSHORE SEAFLOOR AROUND MARGARITA ISLAND, VENEZUELA [001346] ..... 10:50 A
- 9 Im C. Shin\*: PALEOCEANOGRAPHIC HISTORY DURING HOLOCENE IN THE SOUTHEAST VENEZUELA BASIN, CARIBBEAN SEA [014879] ..... 11:10 A
- 10 Michael W. Howell\*, Robert C. Thunell: ORGANIC CARBON ACCUMULATION IN BACINO BANNOCK, EASTERN MEDITERRANEAN SEA: IMPLICATIONS FOR SAPROPEL FORMATION [007661] ..... 11:30 A

- 7 G. G. Gibson, J. R. Huntsman\*: STRATIGRAPHY AND STRUCTURE OF THE GOLD HILL SHEAR ZONE, STANLY AND CABARRUS COUNTIES, NORTH CAROLINA [001298] ..... 10:30 A
- 8 James F. Conley\*: RELATIONSHIPS OF THE RIDGWAY AND BOWENS CREEK FAULTS TO THE SMITH RIVER ALLOCHTHON [017714] ..... 10:50 A
- 9 John E. McBride\*: RESOLUTION OF THE BRUNSWICK MAGNETIC ANOMALY PROBLEM [005250] ... 11:10 A
- 10 J. D. Marr, Jr.\*, D. G. Mose: RUBIDIUM-STROMTIUM WHOLE-ROCK DATES FROM THE CENTRAL PIEDMONT OF VIRGINIA: CONFIRMATION OF A GRENVILLE AGE FOR THE GOOCHLAND TERRANE [001490] ..... 11:30 A
- 11 Stewart S. Farrar\*, Melanie J. Givan: ALKALINE-PERALKALINE (A-TYPE) GRANITES OF THE EASTERN PIEDMONT, NORTH CAROLINA AND VIRGINIA [019343] ..... 11:50 A

**ECONOMIC GEOLOGY**

Columbia 2, Radisson Hotel, 8:25 A.M.

Steven K. Mittwede and Keith I. McConnell, Presiding

- INTRODUCTION, Steven K. Mittwede ..... 8:25 A
- 1 William L. Gunter\*, Joel P. Padgett: BARIITE HILL: A NEW GOLD DEPOSIT IN MCCORMICK COUNTY, SOUTH CAROLINA [003503] ..... 8:30 A
- 2 John E. Callahan\*, Michael M. Kimberley: BRYOPHYTES (MOSSES): GOLD ACCUMULATORS UNDER FIELD AND EXPERIMENTAL CONDITIONS [015177] ..... 8:50 A
- 3 K. I. McConnell, C. E. Abrams\*: METAMORPHOSED FELSIC TO INTERMEDIATE VOLCANIC ROCKS AND THEIR ASSOCIATION WITH VOLCANOGENIC GOLD DEPOSITS IN THE NORTHERN PIEDMONT OF GEORGIA [002791] ..... 9:10 A
- 4 Jerry M. German\*: GEOLOGY OF THE DAHLONEGA AND CARROLL COUNTY GOLD BELTS, GEORGIA [017747] ..... 9:30 A
- 5 Steven K. Mittwede\*: GOLD MINERALIZATION AND ITS RELATIONSHIP TO VOLCANIC STRATIGRAPHY OF THE KINGS MOUNTAIN BELT, PICOLET MILLS QUADRANGLE, SOUTH CAROLINA [001430] ..... 9:50 A
- COFFEE BREAK ..... 10:10 A
- 6 R. G. Schmidt\*, Pablo Gumiál, Alba Payas: THE SEARCH FOR ORE CONTROLS IN GOLD DEPOSITS OF THE SNOW CAMP-SAXAPARAW AREA, NORTH CAROLINA [005904] ..... 10:30 A
- 7 Michael S. Friddell\*, L. Jeane Smith: CONSTRUCTION MATERIAL POTENTIAL OF THE EASTERN COASTAL PLAIN OF GEORGIA [017729] ..... 10:50 A
- 8 Habte G. Churnet\*: STYLOLITES AS INDICATORS OF THE RELATIVE AGE OF EMPLACEMENT OF ZINC DEPOSITS IN TENNESSEE [022432] ..... 11:10 A
- 9 F. C. Furman\*, K. C. Misra, O. C. Kopp, R. Sassen: THE DEVONIAN CHATTANOOGA SHALE, A POSSIBLE SOURCE OF MISSISSIPPI VALLEY-TYPE MINERALIZATION IN EAST TENNESSEE [002319] ..... 11:30 A

**PIEDMONT PROVINCE: STRUCTURE AND TECTONICS**

Columbia 3, Radisson Hotel, 8:25 A.M.

Arthur W. Snoke and Steven A. Goldberg, Presiding

- INTRODUCTION, Arthur W. Snoke ..... 8:25 A
- 1 Steven A. Goldberg\*, Mark G. Steltenpohl: EVIDENCE FOR ALLEGHANIAN PENETRATIVE DEFORMATION IN THE INNER PIEDMONT OF ALABAMA [021427] ..... 8:30 A
- 2 Stephen A. Kish\*: POST-ALLEGHANIAN UPLIFT ADJACENT TO MAJOR DUCTILE FAULT ZONES IN THE SOUTHERN APPALACHIAN PIEDMONT [015310] ..... 8:50 A
- 3 Thomas S. Lawrence\*, Timothy E. La Tour: A COMPARISON OF THE GOAT ROCK AND BARTLETTS FERRY FAULTS, GEORGIA, USING GEOTHERMOMETRY [021286] ..... 9:10 A
- 4 Mark G. Steltenpohl\*, Robert J. Hooper, Robert D. Hatcher, Jr.: KINEMATICS OF FAULT ZONES ALONG THE EAST AND WEST FLANKS OF THE PINE MOUNTAIN TERRANE, ALABAMA AND GEORGIA [022370] ..... 9:30 A
- 5 Arthur W. Snoke\*, B. Ronald Frost: HIGH PRESSURE PELITIC SCHIST FROM THE LAKE MURRAY SPILLWAY, SOUTH CAROLINA PIEDMONT [021298] ..... 9:50 A
- 6 Arthur E. Maybin III, Steven K. Mittwede\*: THE ENOREE MELANGE, LAURENS COUNTY, SOUTH CAROLINA [001435] ..... 10:10 A

**ENVIRONMENTAL GEOLOGY AND HYDROGEOLOGY**  
Auditorium, USC Law Center, 8:25 A.M.

Edward O'Donnell and Douglas Mose, Presiding

- INTRODUCTION, Douglas Mose ..... 8:25 A
- 1 Edward O'Donnell\*, Robert W. Ridky, Robert K. Schulz: CONTROL OF WATER INFILTRATION INTO NEAR SURFACE RADIOACTIVE AND HAZARDOUS WASTE DISPOSAL UNITS [007154] ..... 8:30 A
- 2 Cheng Y. Hung\*: UNCERTAINTIES IN THE ANALYSIS OF RADIONUCLIDE TRANSPORT FOR HEALTH EFFECTS EVALUATIONS IN THE GEOSPHERE DOWNSTREAM OF A LOW-LEVEL RADIOACTIVE WASTE DISPOSAL SITE [005776] ..... 8:50 A
- 3 David P. Sanders\*: APPLICATION OF THE ELECTROMAGNETIC TERRAIN CONDUCTIVITY METHOD AT WASTE SITES IN THE SOUTHERN PIEDMONT [003500] ..... 9:10 A
- 4 Charles M. Gorman\*, Stephen C. Godfrey, Walter C. Gerald, William E. Powell: SELECTING REMEDIATION STRATEGIES FOR PETROLEUM-HYDROCARBON CONTAMINATED SITES IN SOUTH CAROLINA [003501] ..... 9:30 A
- 5 James W. Webster\*, Nicholas C. Crawford: THE EFFECTS OF CAVES ON RESIDENTIAL RADON LEVELS: BOWLING GREEN, WARREN COUNTY, KENTUCKY [019327] ..... 9:50 A
- 6 Douglas Mose\*, George Mushrush: COMPARISON BETWEEN ACTIVATED CHARCOAL AND ALPHA-TRACK MEASUREMENT OF INDOOR RADON IN HOMES IN VIRGINIA AND MARYLAND: 1986-1987 [001495] ..... 10:10 A
- 7 Douglas Mose, Stephen Hall\*: EFFECT OF HOME CONSTRUCTION AND MITIGATION METHODS ON INDOOR RADON: VIRGINIA AND MARYLAND HOMES DURING THE WINTER OF 1986-1987 [001491] ..... 10:30 A
- 8 Paul J. Nuthig\*, Michael J. Andrejko: HAZARDOUS WASTES, CERCLA, SARA AND REAL ESTATE TRANSACTIONS: A BOON OR A BANE TO THE CONSULTING GEOLOGIST? [003498] ..... 10:50 A
- 9 Satish Kastury, Merlin D. Russell, Jr., Stephen Knuttel: RCRA/CERCLA INTERACTION - A CASE STUDY IN FLORIDA [120808] ..... 11:10 A
- 10 Robert E. Weems\*, Robert B. Jacobson, Stephen F. Obermeier, Gregory S. Gohn, Mayer Rubin: NEW RADIOCARBON AGES FROM EARTHQUAKE-INDUCED LIQUEFACTION FEATURES IN THE LOWER COASTAL PLAIN OF THE CAROLINAS [006060] ..... 11:30 A
- 11 W. F. Wilson\*, P. A. Carpenter III, J. C. Reid: GOING FOR THE SUPERCONDUCTING SUPER COLLIDER (SSC) [005325] ..... 11:50 A

**POSTER SESSION III: HYDROGEOLOGY, GEOMORPHOLOGY, ENGINEERING GEOLOGY**  
Assembly 2, Radisson Hotel, 8:00 A.M. - 12:00 Noon

Authors will be present from 8:30 to 11:30 A.M.

- Richard E. Spruill, John J. Johnson\*: HYDROGEOLOGY OF THE LOWER CASTLE HAYNE AQUIFER NEAR WASHINGTON, N.C. [015153] ..... Booth 1
- Koren L. Taylor\*: SIMULATING FRACTURE FLOW IN A SANDSTONE AT MAKEY FLATS RADIOACTIVE WASTE BURIAL SITE, KENTUCKY [001103] ..... Booth 2
- David Jon Furbish, Mark A. Lyverse\*: FILTERING THE EFFECTS OF CHANGES IN BAROMETRIC PRESSURE FROM RECORDS OF WATER LEVEL IN AN ARTESIAN WELL [001102] ..... Booth 3



Thomas Jay Schmitt*: MODELING DRAWDOWN AND RECOVERY OF PUMPING TESTS IN CRYSTALLINE ROCKS [017749] .....	Booth 4
Peter A. Stone*, Thomas D. Mathews, Raymond L. Knox: RECHARGING OF THE TERTIARY LIMESTONE (FLORIDAN) AQUIFER SYSTEM IN SOUTH CAROLINA [003496] .....	Booth 5
Peter A. Stone, Richard W. Oldham*, Stanley L. Clark: GEOLOGIC CONTROLS THAT COMPLICATE SHALLOW GROUND-WATER AND CONTAMINANT FLOW IN SAPROLITE AND FRACTURED ROCK OF THE S.E.U.S. PIEDMONT [003497] .....	Booth 6
Kimberly Calhoun*, L. T. Long, Thomas J. Schmitt: SINKHOLES DETECTED BY MICROGRAVITY SURVEY [004100] .....	Booth 7
Richard U. Birdseye*, Gregory L. Christians: STRUCTURAL CONTROL OF DRAINAGE IN LATE PLEISTOCENE AND HOLOCENE SEDIMENTS, ASCENSION PARISH, LOUISIANA [022638] .....	Booth 8
Whitney J. Autin*: MAPPING ALLOFORMATIONS IN THE AMITE RIVER, SOUTHEASTERN LOUISIANA [005626] .....	Booth 9
Edward R. Burt III*: THE NORTH CAROLINA GEOLOGICAL SURVEY'S ROLE IN THE ESTABLISHMENT OF A LOW-LEVEL RADIOACTIVE WASTE DISPOSAL FACILITY [021417] .....	Booth 10

**SYMPOSIUM: STRUCTURAL GEOLOGY OF DUCTILE SHEAR ZONES IN THE SOUTHERN APPALACHIAN MOUNTAINS**  
Columbia 3, Radisson Hotel, 1:25 P.M.

Andy R. Bobyarchick and Harmon D. Maher, Jr., Presiding

INTRODUCTION, Andy R. Bobyarchick .....	1:25 P
1 Angang Liu*, Robert D. Hatcher, Jr.: GEOLOGIC SETTING AND STRAIN HISTORY OF THE LATE PALEOZOIC DEXTRAL STRIKE-SLIP FABRICS IN THE CRYSTALLINE SOUTHERN APPALACHIANS, NORTHWESTERN SOUTH CAROLINA AND ADJACENT AREAS [022449] .....	1:30 P
2 A. L. Stieve*, R. D. Hatcher, Jr.: DEXTRAL, STRIKE-SLIP MOVEMENT ON A CROSS-CUTTING SHEAR ZONE INTO THE TALLULAH FALLS DOME RELATED TO LATE ALLEGHANIAN MOVEMENT ON THE BREVARD FAULT ZONE [021483] .....	1:50 P
3 Jonathan W. Mies*: A MAJOR THRUST AT THE BASE OF THE ASHE FORMATION IN THE BLUE RIDGE OF NORTHWESTERN NORTH CAROLINA [001793] .....	2:10 P
4 Robert D. Hatcher, Jr.*: THE BREVARD FAULT ZONE: FACTS THAT CONSTRAIN A MULTIPHASE MULTIDIRECTIONAL MOVEMENT HISTORY [002302] .....	2:30 P
5 William A. Ranson*, John M. Garihan: MESOSCOPIC STRUCTURAL EVIDENCE FOR LONGITUDINAL SHEARING, OBLIQUE CRUSTAL EXTENSION, AND FAULT BLOCK ROTATION DURING DEVELOPMENT OF MESOZOIC MARIETTA-TRYON GRABEN, PIEDMONT OF NORTHWEST SOUTH CAROLINA [015252] .....	2:50 P
6 A. E. Gates*: ALLEGHANIAN STRAIN PARTITIONING IN THE SOUTHERN APPALACHIANS, VIRGINIA [005241] .....	3:10 P
7 R. J. Hooper*: DEXTRAL OFFSET ON THE TOWALIGA-MIDDLETON-LOWNDESVILLE FAULT ZONE: EVIDENCE FROM THE ROCK EAGLE COMPLEX, N.W. PUTNAM COUNTY, CENTRAL GEORGIA [013349] .....	3:30 P
8 Robert M. Druhan, J. Robert Butler*, J. Wright Horton, Jr., Edward P. Stoddard: TECTONIC SIGNIFICANCE OF THE NUTBUSH CREEK FAULT ZONE, EASTERN PIEDMONT OF NORTH CAROLINA AND VIRGINIA [001789] .....	3:50 P
9 Andrew D. Smits*, Edward F. Stoddard, William R. Boltin: THE HOLLISTER MYLONITE ZONE IN THE NORTHEASTERN NORTH CAROLINA PIEDMONT [018661] .....	4:10 P
10 A. J. Dennis*: INSIGHT ON CONJUGATE SHEAR BANDS FROM THE IRMO SHEAR ZONE [021454] .....	4:30 P
11 P. E. Sacks*, D. T. Secor, Jr.: TEMPORAL CHANGES IN ALLEGHANIAN TECTONIC TRANSPORT DIRECTIONS IN THE SOUTHERN APPALACHIANS [021484] .....	4:50 P
CONCLUSION, Allen J. Dennis .....	5:10 P

**SYMPOSIUM: GOLD RESOURCES OF THE SOUTHERN PIEDMONT AND BLUE RIDGE**  
Auditorium, USC Law Center, 1:25 P.M.

P. Geoffrey Feiss and W. Edwin Sharp, Presiding

INTRODUCTION, P. Geoffrey Feiss .....	1:25 P
1 Gregory M. Guthrie*, C. Michael Leasber: STRUCTURAL AND METAMORPHIC CONTROLS ON LODE GOLD MINERALIZATION, TALLAPOOSA COUNTY, ALABAMA [022416] .....	1:30 P
2 Mark J. Johnson*, Robert B. Cook, Jr.: LITHOLOGIC AND STRUCTURAL CONSTRAINTS ON GOLD MINERALIZATION, EAGLE CREEK DISTRICT, TALLAPOOSA COUNTY, ALABAMA [018519] .....	1:50 P
3 George V. Albino*: GOLD DEPOSITS OF THE DARLONEGA BELT, NORTHEAST GEORGIA: MOTHER LODE-TYPE MINERALIZATION AT MID-CRUSTAL DEPTHS [024153] .....	2:10 P
4 P. Geoffrey Feiss*: STRUCTURAL SETTING OF THE RAI MINE, LANCASTER CO., SC [018668] .....	2:30 P
5 Peter H. Evans*: EXPLORATION HISTORY AND DEVELOPMENT OF THE RIDGEWAY GOLD DEPOSITS, FAIRFIELD COUNTY, SOUTH CAROLINA [021462] .....	2:50 P
6 Kenneth A. Gillon*, Roy P. Duckett: GEOLOGY OF THE RIDGEWAY GOLD DEPOSITS, FAIRFIELD COUNTY, SOUTH CAROLINA [003521] .....	3:10 P
7 J. Robert Butler*, John W. Scheets, James M. Stonehouse, Donald R. Taylor, Roger Q. Callaway: THE BREWER GOLD MINE, CHESTERFIELD COUNTY, SOUTH CAROLINA [001801] .....	3:30 P
8 G. Todd Ririe*: CHARACTERISTICS OF ROCKS WITH HIGH-ALUMINA MINERALS ASSOCIATED WITH GOLD DEPOSITS [025984] .....	3:50 P
9 T. L. Klein*: GEOCHEMICAL AND ALTERATION STUDIES OF GOLD DEPOSITS IN THE CENTRAL CAROLINA SLATE BELT [020711] .....	4:10 P
10 Jonathan A. Powers*: GOLD MINERALIZATION AND HIGH-ALUMINA ALTERATION IN THE ROBBINS DISTRICT OF THE CAROLINA SLATE BELT, MOORE COUNTY, NORTH CAROLINA [001790] .....	4:30 P
11 J. P. W. Badham*: STRATIFORM GOLD MINERALIZATION - EKHALITE, EPITHERMAL, OR SHEAR ZONE? [015140] .....	4:50 P
CONCLUSION, W. Edwin Sharp .....	5:10 P

**HYDROGEOLOGY**

Columbia 1, Radisson Hotel, 1:25 P.M.

L. Robert Gardner and Francis H. Chapelle, Presiding

INTRODUCTION, Francis H. Chapelle .....	1:25 P
1 R. Laurence Davis, Calvin R. Johnson, Jr.*: A PRELIMINARY MODEL OF THE HYDROLOGIC SYSTEM ON SAN SALVADOR ISLAND, BAHAMAS [019485] .....	1:30 P
2 Richard P. McCulloh*: SOME IMPLICATIONS OF REGIONAL LITHOFACIES CONTROL OF GULF COAST GEOPRESSURES [005624] .....	1:50 P
3 David Jon Furbish*: ESTIMATING AQUIFER COMPRESSIBILITY USING TIME SERIES OF BAROMETRIC PRESSURE AND WATER LEVEL IN AN ARTESIAN WELL [001101] .....	2:10 P
4 Eberhard Werner*: PHOTOLINEAMENTS AND KARST CONDUIT SPRINGS IN THE GREENEBRIER LIMESTONES OF WEST VIRGINIA [005228] .....	2:30 P
5 Philip P. Reeder*, Nicholas C. Crawford: EVALUATION OF STORM WATER RUNOFF REMOVAL INTO AN URBANIZED KARST AQUIFER: BOWLING GREEN, KENTUCKY [023465] .....	2:50 P
6 Ronald A. Burt*: CALCITE CEMENTATION DRIVEN BY OLIGOCLEASE INCONGRUENT DISSOLUTION IN THE UPPER FLORIDAN AQUIFER OF SOUTH CAROLINA AND NORTHEASTERN GEORGIA [007305] .....	3:10 P
7 Francis H. Chapelle, James T. Morris, Peter B. McMahon*: BACTERIAL METABOLISM AND THE <sup>13</sup> C COMPOSITION OF GROUND WATER; FLORIDAN AQUIFER SYSTEM, SOUTH CAROLINA [007302] .....	3:30 P
8 Linda E. Leard, Rona J. Donahoe*: FLUID/MINERAL INTERACTIONS IN SANDSTONES APPLICABLE TO WATERFLOOD EOR [015377] .....	3:50 P
9 Harry E. LeGrand*: RELATION OF A REGIONAL AQUIFER AND THE 1886 CHARLESTON EARTHQUAKE [001018] .....	4:30 P

**PALEONTOLOGY AND PALEOBOTANY**

Columbia 2, Radisson Hotel, 1:25 P.M.

Frank K. McKinney and Patricia H. Kelley, Presiding

INTRODUCTION, Patricia H. Kelley .....	1:25 P
1 G. G. Gibson*, S. A. Teeter: VARIATIONS IN THE GEOMETRY OF THE PETALOID EDIACARIAN BODY FOSSILS FROM THE CAROLINA SLATE BELT, SOUTHCENTRAL NORTH CAROLINA [001299] .....	1:30 P
2 T. D. Whipple, D. L. Lumm, M. F. Miller, T. E. Kessler*, L. R. Rhoades: DEPOSITIONAL SETTING AND TAPHONOMIC PROCESSES, CATHEYS FORMATION (MIDDLE ORDOVICIAN), NASHVILLE, TENNESSEE [007354] .....	1:50 P
3 Thomas W. Broadhead*, Michael A. Gibson, Kenneth R. Walker: EARLY MARINE FIBROUS CEMENT AS A PSEUDO-HOLOTHECAL COVERING FOR FAVOSITID CORAL COLONIES IN THE LOWER DEVONIAN OF TENNESSEE [002310] .....	2:10 P
4 Robert A. Gastaldo*: PHYTOTAPHONOMIC ASPECTS OF A DISTRIBUTARY CHANNEL FILL IN THE MARY LEE COAL, WARRIOR COAL FIELD, ALABAMA [022401] .....	2:30 P
5 B. Lampley*: PALEOGENE POLLEN AND SPORES FROM THE SAVANNAH RIVER PLANT AND THE CLUBHOUSE CROSSROADS COREHOLE 1, SOUTH CAROLINA [003534] .....	2:50 P
6 Ralph E. Willoughby*: LARGER INVERTEBRATES FROM THE CHAPEL BRANCH MEMBER OF THE MIDDLE EOCENE SANTEE LIMESTONE, CALHOUN AND ORANGEBURG COUNTIES, SOUTH CAROLINA [001428] .....	3:10 P
7 Victor A. Zullo*: SYSTEMATICS AND BIOSTRATIGRAPHY OF EOCENE BARNACLES FROM THE SAVANNAH RIVER REGION AND ADJACENT PARTS OF SOUTH CAROLINA AND GEORGIA [015169] .....	3:30 P
8 Patricia H. Kelley*: STEREOTYPED DRILLING AND RATES OF SUCCESSFUL PREDATION BY NATICID GASTROPODS OF THE CHESAPEAKE GROUP [019699] .....	3:50 P
9 Mike W. Klug*, Virginia Millar: THE DISTRIBUTION OF CALLICHRIDS MAJOR ON THE COAST OF GEORGIA [018598] .....	4:10 P
10 Frank K. McKinney*, Susan R. Wilson, Timothy F. Cook: ENCRUSTING ORGANISMS ON DEAD CLAMSHELLS: TAPHONOMIC IMPLICATIONS OF LABORATORY DEGRADATION [018638] .....	4:30 P

VALLEY AND RIDGE PROVINCE: STRUCTURE AND TECTONICS  
Columbia 4, Radisson Hotel, 1:25 P.M.

William M. Dunne and Mervin J. Bartholomew, Presiding

INTRODUCTION, Mervin J. Bartholomew .....	1:25 P
1 Mark A. Evans*, William M. Dunne: VERTICAL STRAIN VARIATION IN A THRUST SHEET: AN EXAMPLE FROM THE NORTH MOUNTAIN THRUST SHEET, VIRGINIA [001869] .....	1:30 P
2 Stuart L. Dean, Byron R. Kulander*, Peter Lessing, Mark L. McKoy: GEOLOGY OF THE GREAT VALLEY IN NORTHERN JEFFERSON COUNTY AND NORTHEASTERN BERKELEY COUNTY, WEST VIRGINIA [023565] .....	1:50 P
3 Stuart L. Dean*, Mark L. McKoy, Peter Lessing, Byron R. Kulander: GEOLOGY OF THE HALFMOON MOUNTAIN AREA, HARDY COUNTY, WEST VIRGINIA [019309] .....	2:10 P
4 Steven Gerritsen*, William M. Dunne: REEXAMINATION OF THE SMOKE HOLES, WV, AND THE ROLE OF FAULTING IN COVER DEFORMATION WITHIN THE CENTRAL APPALACHIANS [005224] .....	2:30 P
5 A. L. Reesman*, R. B. Stearns: THE CUMBERLAND PLATEAU DOME - AN ISOSTATICALLY SUPPRESSED LATE PALEOZOIC EXTENSION OF THE JESSAMINE DOME [018510] .....	2:50 P
6 William M. Dunne, David A. Ferrill*: BCF DIAGRAMS FOR COVER RESPONSES TO BLIND THRUST SYSTEMS [005226] .....	3:10 P
7 Steven I. Udansky*: A FULLY LENGTH-BALANCED MODEL FOR THE EVOLUTION OF THRUST-RAMP ANTICLINES WITH ARBITRARY LINE DIPS BY FAULT-BEND FOLDING [023467] .....	3:30 P
8 Mervin J. Bartholomew*: NORTHWESTERN EXTENT OF MESOZOIC EXTENSIONAL FAULTING IN THE VIRGINIA BLUE RIDGE [022920] .....	3:50 P
9 E. M. Dullaghan*, R. Venkateskrishnan: EXAMPLE OF EXTENSIONAL STYLE DEFORMATION IN THE RICHMOND TRIASSIC BASIN, VIRGINIA [014799] .....	4:10 P

10 Mary K. Roden*, Donald S. Miller: APATITE FISSION-TRACK THERMOCHRONOLOGY OF THE CENTRAL AND SOUTHERN APPALACHIAN BASIN [015546] .....	4:30 P
--	--------

SEDIMENTOLOGY AND GEOMORPHOLOGY II: MARINE  
Columbia 5 & 6, Radisson Hotel, 1:25 P.M.

Miles O. Hayes and William J. Cleary, Presiding

INTRODUCTION, Miles O. Hayes .....	1:25 P
1 Robert C. Whisonant*, Kimbell L. Knight: TRACTION TO SEDIMENT GRAVITY FLOW REGIMES REPRESENTED IN CARBONATE INTRACLAST CONGLOMERATES IN THE NOLICHUCKY FORMATION, UPPER CAMBRIAN, SOUTHWESTERN VIRGINIA [015094] .....	1:30 P
2 Kimbell L. Knight*, Robert C. Whisonant: CORRELATION OF CARBONATE CONGLOMERATES ACROSS A CAMBRIAN INTRASHELF BASIN, SOUTHERN APPALACHIANS, VIRGINIA [015093] .....	1:50 P
3 Eric R. Powers*, Stanley R. Riggs, Emily Maxwell: RELATIONSHIP OF ORGANIC CARBON TO LITHOFACIES AND CYCLIC DEPOSITION IN THE MIOCENE PUNGO RIVER FM., NORTH CAROLINA CONTINENTAL MARGIN [007239] .....	2:10 P
4 Wayne C. Isphording*, Edward G. Leach, Gregory W. Isphording: CATASTROPHISM...ALIVE AND WELL IN THE NORTHERN GULF OF MEXICO!! [018526] .....	2:30 P
5 Samuel J. Bentley*: BIOGENIC AND PHYSICAL CHARACTERISTICS OF A TIDAL FLAT ON A MESOTIDAL COAST; WASSAU SOUND, GEORGIA [015291] .....	2:50 P
6 Walter J. Sexton*, Douglas P. Imperato, Helen M. Johnson: TIDAL POINT BARS OF THE SOUTH CAROLINA COAST [018631] .....	3:10 P
7 W. J. Cleary*, P. E. Rosier: NEW RIVER INLET, NC: DREDGING-RELATED EROSION AND ACCRETION TRENDS ALONG A LOW-MESOTIDAL SHORELINE [021474] .....	3:30 P
8 Miles O. Hayes*: EVOLUTION OF THE HOLOCENE BARRIER ISLANDS OF THE GEORGIA EMBAYMENT [018630] .....	3:50 P
9 William E. Smith*: POSSIBLE GEOMORPHIC EVIDENCE IN THE MOBILE-TENSAW RIVER FLOODPLAIN TERMINUS AREA FOR A CURRENT TREND IN NORTHERN GULF COAST SEA LEVEL RISE [022364] .....	4:10 P
10 Edward A. Council III, Dennis A. Darby*: SOURCES OF SAND IN LARGE ESTUARIES [020685] ...	4:30 P

POSTER SESSION IV: STRUCTURAL GEOLOGY, TECTONICS, PETROLEUM GEOLOGY, GENERAL GEOLOGY, IGNEOUS PETROLOGY  
Assembly 2, Radisson Hotel, 1:30 P.M. - 5:30 P.M.

Authors will be present from 2:00 to 5:00 P.M.

Grant R. Woodwell*, Robin L. Crowder: DEFORMATION MECHANISMS AND PALEOStRESS LEVELS RECORDED IN CRYSTALLINE THRUST FAULTED ROCKS [014822] .....	Booth 1
David T. Allison*: COMPUTER-AIDED STRUCTURAL ANALYSIS: NETPROG, A FORTRAN PROGRAM FOR THE RAPID GRAPHICAL ANALYSIS OF STRUCTURAL AND PETROFABRIC DATA [120801] .....	Booth 2
Patrick R. Conisdine*, Timothy M. Kusky: ARCHEAN COLLISIONAL TECTONICS AT POINT LAKE, N.W.T., CANADA [020686] .....	Booth 3
Tim Kusky*, Declan De Paor: INCLUSION TRAILS IN PORPHYROBLASTS MAY REPRESENT PRIMARY AND NOT TECTONIC FABRICS [003582] .....	Booth 4
Joan M. Spaw*, Kenneth M. Skinner, Connie S. Cigler: FACIES ANALYSIS OF THE SEDIMENTARY SECTION UNDERLYING THE SAVANNAH RIVER PLANT NEAR AIKEN, SOUTH CAROLINA [007049] .....	Booth 5
Shaun A. Winter*, Kenneth W. Kuehn, William G. Buckman: FIELD EVALUATION OF FRACTURE RESERVOIRS USING RADIOMETRICS AND SOIL-GAS GEOCHEMISTRY [019326] .....	Booth 6
Ian M. Johnston*, Jack R. Moody, Julie R. Kemper, Wayne T. Frankie, Robert R. Elkin: EASTERN KENTUCKY UPPER DEVONIAN GAS PRODUCTION FROM A LATE PALEOZOIC FRACTURE SYSTEM [019337] .....	Booth 7

Charles W. Hoffman\*, Patricia E. Gallagher:  
GEOLOGIC MAP OF THE SOUTHEAST AND SOUTHWEST  
DURHAM 7.5 MINUTE QUADRANGLES, NORTH CAROLINA  
[005327] ..... Booth 8

J. Alexander Speer\*: DEPTH AND MINERALOGY OF  
THE MAGMA SOURCE OR PAUSE REGION FOR THE  
LIBERTY HILL GRANITOID PLUTON, SOUTH CAROLINA  
[003969] ..... Booth 9

Steven K. Campbell\*: GEOLOGY, PETROLOGY, AND  
GEOCHEMISTRY OF METAMORPHOSED MAFIC AND  
FELSIC DIKES INTRUDING THE LEMON SPRINGS  
PLUTON, SOUTHWESTERN MARGIN OF THE RALEIGH  
BELT, NORTH CAROLINA [018582] ..... Booth 10