SEPM SESSION ON ANCIENT CARBONATES: SEDIMENTATION AND DIAGENESIS

Emerald Room

Presiding: C. H. MOORE, JR., L. C. PRAY

1. W. J. KOCH: Lower Triassic lithofacies of Cordilleran miogeosyncline, western United States 1:30
2. D. N. LUMSDEN, M. T. LEDBETTER: Pennsylvanian-Permian miogeosyncline to nearshore shelf carbonate facies transition, Clark County, Nevada 1:50
3. P. R. ROSE: Stratigraphic revision, Edwards Group (Lower Cretaceous) of Texas, and regional surface-subsurface synthesis 2:10
4. W. D. MARTIN: Petrography of composite vertical section of Cincinnatian Series limestones, southwestern Ohio and adjacent areas 2:25
5. J. C. HOPKINS: Production of reef-margin breccias by submarine cementation and slumping of carbonate sands, Miette reef complex 2:45
6. J. W. PARKER, L. D. TAYLOR: Sedimentary breccia in Bayport Limestone at Bellevue, Michigan 3:05
7. T. L. ROWLAND: Algal mudstone mounds in Morrowan Stage (Lower Pennsylvanian) in northeastern Oklahoma 3:25
8. L. C. PRAY: Submarine slope erosion along Permian bank margin, West Texas 3:40
9. D. C. THORSTENSON, F. T. MACKENZIE, BYRON RISTVET: Experimental cementation of carbonate sands 4:00
10. R. REZAK: Organic influences on carbonate cementation 4:15
11. T. FREEMAN: Magnesium-rich water from evaporite-bearing shales, and diagenesis of subjacent carbonates—Keuper-Muschelkalk, Iberian Range, Spain 4:35

SEPM SESSION ON RECENT CLASTICS

Embassy Room

Presiding: D. S. GORSLINE, S. ARONOW

1. M. E. FIELD, E. P. MEISBURGER, D. B. DUANE: Late Pleistocene-Holocene sedimentation history of Cape Kennedy inner continental shelf 1:30
2. J. C. KRAFT, G. K. ELLIOTT: Sediment facies patterns and geologic history of coastal marsh 1:45
3. R. A. DAVIS, JR., W. T. FOX: Beach and nearshore processes and morphology in nontidal environment 2:00
4. R. Q. OAKS, JR., E. C. OAKS: Stratification in Willow Creek alluvial fan, Eureka Valley, Inyo County, California 2:20
5. L. L. BRADY, H. E. JOBSON: Experimental study of heavy mineral segregation under alluvial flow conditions 2:35
6. R. M. FLORES: Variations in heavy mineral composition during transport of short-headed stream sands 2:55
7. D. J. STANLEY, T.-C. HUANG: Multiple origin of hemipelagic mud fill in Mediterranean basin 3:10
8. S. M. GAGLIANO: Building new marshes and estuaries in coastal Louisiana through controlled sedimentation 3:25
9. R. P. SELF: Cretaceous lithoclasts in modern beach and river sands, Veracruz, Mexico 3:45
10. A. S. NAIDU: Clay mineral composition of Beaufort Sea sediments, Arctic Ocean 4:00

THURSDAY MORNING, APRIL 1

SEPM COLLOQUIUM 9:00–12:00

Oceanic Plankton

Department of Geology, Rice University

Presiding: E. A. PESSAGNO, JR.

ADDITIONAL PAPERS

(BY TITLE)

M. D. PICARD, L. R. HIGH, JR.: Sedimentary structures and bedding along ephemeral streams

J. R. UNDERWOOD, JR., Y. Y. YOUASH, G. PHILIP: Uniquely rounded desiccation columns near Euphrates River, northwestern Iraq—produced by prolonged erosion in arid climate

ABSTRACTS OF PAPERS

AHR, WAYNE M., Dept. Geol., and RICHARD REZAK, Dept. Oceanog., Texas A&M Univ., College Station, TX 77843

LATE CAMBRIAN ALGAE FROM CENTRAL TEXAS

Late Cambrian algal reefs and bioherms in the Llano uplift of central Texas contain 4 genera of fossil algae. In decreasing abundance, they are *Girvanella, Renalcis, Nuia,* and *Epiphyton.* Detailed taxonomic investigations of the algae and studies of their host rocks show that changes in the ancient environment can be determined from (1) variations in relative abundance of *Nuia, Renalcis,* and *Girvanella;* (2) variations in growth patterns of *Girvanella;* (3) variations in the macrostructure texture and composition of the algal limestones; and (4) combinations of 1, 2, and 3. The occurrence of only 1 or 2 of these variables is sufficient to provide information about depositional environments. This can be accomplished by thin-section study of fossil algae in cuttings-size fragments.

AMARAL, EUGENE J., Dept. Geol. Sci., Univ. Texas, Austin, TX 78712, and WAYNE A. PRYOR, Dept. Geol., Univ. Cincinnati, Cincinnati, OH 45221

TEXTURE AND GRAIN SURFACE CHARACTER OF ST. PETER SANDSTONE

The St. Peter Sandstone in Wisconsin, Minnesota, and Illinois was investigated, and size, shape, and grain surface characteristics were determined by modern analytic techniques.

Texturally the St. Peter Sandstone is a fine to medium-fine (av $M_z = 2.09\ \phi$), moderately to moderately well sorted (av $\sigma_I = 0.59\ \phi$), finely skewed, mesokurtic sandstone. Textural parameters exhibit little vertical or horizontal variability. The average grain roundness is a ρ value of 4.76 (rounded) with a significant percentage of angular grains in the very fine sand and silt fractions. The average grain Elongation Index is 0.67 (intermediate) with an average 23% of the grains in the very elongate class. High magnification studies show grain surfaces to be devoid of the classic abrasion features of frosting. The "frosting" is chiefly minute, crystallographically oriented, rhombohedral and prism overgrowths of authigenic quartz,