

SOUTHWEST SECTION

11TH ANNUAL MEETING

Lubbock, Texas

February 6-7, 1969

The 11th annual meeting of the Southwest Section of AAPG will be held on February 6-7, 1969 on the campus of Texas Technological College in Lubbock, Texas.

The Lubbock Geological Society will host the convention. The meeting has been planned by a committee chaired by GROVER E. MURRAY, President of Texas Tech, and assisted by co-chairmen R. B. MATTOX and A. D. JACKA.

The theme of the technical program, "Academics and Economics," will be introduced by the keynote speaker, GROVER E. MURRAY. Speakers have been brought together who span the academic and economic aspects of the southwestern United States and northern Gulf of Mexico. Topics cover the range from recent sediments to basement petrology with perspectives from geology, geochemistry, geophysics, and oceanography.

TECHNICAL PROGRAM SUMMARY

THURSDAY MORNING, FEBRUARY 6

1. GROVER E. MURRAY, Economics of academics (Keynote address)
2. ROBERT F. DILL, New evidence on Pleistocene sea-level changes from *Deepstar* dives
3. JOHN W. ANTOINE, Role of salt tectonics in structural history of western Gulf of Mexico
4. ROBERT N. MITCHUM, JOHN N. BUBB, DOUGLAS PERRY, Authigenic and detrital dolomite in unconsolidated deep-water sediments of west Florida slope, Gulf of Mexico
5. JAMES K. MUNN, Breedlove field, Martin County, Texas

THURSDAY AFTERNOON, FEBRUARY 6

6. ROBERT J. DUNHAM, (To be announced)
7. KARL W. KLEMENT, Phylloid algal banks
8. ROBERT F. SIPPEL, Luminescence petrography of sandstones
9. ALONZO D. JACKA, Observations on sandstone cementation
10. DAVID V. LEMONE, Canadian (Early Ordovician) El Paso Group, southern Franklin Mountains, El Paso County, Texas
11. WILTON J. BROWN: Bloodworth Northeast field, Coke and Nolan Counties, Texas

FRIDAY MORNING, FEBRUARY 7

1. RODGER E. DENISON, Basement rocks in west Texas and eastern New Mexico
2. NEIL D. OPDYKE, Paleomagnetic correlation
3. CORWIN C. REEVES, JR., Texas Lineament: Pleistocene-Holocene movement?
4. WULF A. GOSE, Mossbauer studies on a large graphite crystal
5. ROBERT C. SHUMAKER, Disharmonic folding in Iran
6. STANLEY E. CEBULL, Characteristics and tectonic setting of growth faults in eastern Venezuelan basin

FRIDAY AFTERNOON, FEBRUARY 7

Questions and Discussions

ABSTRACTS OF PAPERS

(in order of presentation)

GROVER E. MURRAY, President, Texas Technical College, Lubbock, Tex.

ECONOMICS OF ACADEMICS

(Keynote address)

ROBERT F. DILL, U. S. Navy Electronics Laboratory, San Diego, Calif.

NEW EVIDENCE ON PLEISTOCENE SEA-LEVEL CHANGES FROM *Deepstar* DIVES

(No abstract submitted)

JOHN W. ANTOINE, Dept. of Oceanography, Texas A&M Univ., College Station, Tex.

ROLE OF SALT TECTONICS IN STRUCTURAL HISTORY OF WESTERN GULF OF MEXICO

The discovery through the JOIDES drilling program that the Sigsbee Knolls and domes represent intrusive salt bodies has made it necessary to review many old concepts concerning the structural evolution of the Gulf of Mexico. The debate concerning the physiography of the Gulf during the time of salt deposition is now more heated than ever. It has been suggested that, during this time, the Gulf was an ocean basin, a shallow sea, a landmass, or an ocean that had risen to shallow depths above a rising convection cell. Any one of these hypotheses must be able to explain the presence of salt, at least under part of the central basin, if it is to be considered seriously. The possibility that thick salt beds can be deposited at oceanic depths has been questioned. Although at first thought this may discount a hypothesis that places the Gulf basin at great depth during Triassic-Jurassic time, the structure of the bordering continental slopes of the western Gulf suggests an alternate hypothesis: the Gulf is an oceanic basin along the western margins of which great amounts of salt accumulated. This salt migrated toward the basin. The distribution of salt diapirs throughout the area of subsurface salt is controlled mainly by sediment thickness and the distribution of massive carbonate sequences. The change from simple ridge structure to diapir swarms, south to north along the eastern coast of Mexico, indicates the influence of the sedimentary cover. The abrupt termination of the diapirs on the southeast in the Bay of Campeche and the position of the Sigsbee Knolls and domes indicate the important (negative?) role played by the carbonate platforms in the distribution of salt diapirs.

ROBERT N. MITCHUM, Humble Oil & Refining Co., Midland, Tex., JOHN N. BUBB, and DOUGLAS PERRY, Humble Oil & Refining Co., Houston, Tex.

AUTHIGENIC AND DETRITAL DOLOMITE IN UNCONSOLIDATED DEEP-WATER SEDIMENTS OF WEST FLORIDA SLOPE, GULF OF MEXICO

Core samples from the West Florida slope contain minor but significant amounts of dolomite in unconsolidated deep-water sediments of Tertiary age. Some of this dolomite appears to be authigenic, and its origin cannot be explained by the well-documented mechanism of dolomitization by contact with brines formed by solar evaporation or igneous activity.