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Course Manual and Atlas of Structural Styles on Reflection Profiles from the Niger Delta, by D.E. Ajakaiye & A.W. Bally, 2002. American Association of Petroleum Geologists Continuing Education Course Note Series 41. Atlas with 23 fold-out sheets, 107 pp. USD 28.00 (for AAPG members USD 22.00). ISBN 0-89181-190-7.

In virtually all textbooks on sedimentology and related topics that appeared within the past twenty years, due attention is given to subsurface methods of investigation. In most studies of this type, the data are provided by geophysical techniques, and with slight exaggeration we may say that the seismic approach is the *primus inter pares* in the domain of geophysics. Seismic reflection surveying is widely used for exploration and development by the petroleum industry, and this has resulted, amongst other things, in fruitful ideas on seismic stratigraphy. Seismic methods, reaching to considerable depths below the surface, enable the study of regional and global sedimentary successions (and their bounding unconformities) which often represent a record of major geological events in the history of Earth. To have significance, the data so obtained need both adequate well control and a conceptual framework attempting to identify sedimentary units that can be related to long-term processes. The latter notion refers to sequence stratigraphy, which has provided the called-for principles. Although its basic tenet - the operation of world-wide changes of eustatic sea-level - is not unchallenged, its impact on geological thinking has been considerable.

In the manual, the subject matter is introduced by an article by Doust and Omatsola (1989). We learn from it that progradation of the Niger delta was controlled by synsedimentary faults and proceeded in stepwise rather than continuous fashion. The delta can be subdivided into a number of major growth-fault-bounded units (depobelts) that succeed each other in southern direction. This overall structure is assumed to be connected with withdrawal and basinward movement of undercompacted and overpressurized marine shales. The subsidence capacity of a depobelt is exhausted when the shales originally underlying it are fully squeezed out by lithostatic pressure.

In the Foreword to the present volume, the authors explain that the examples in the manual and atlas are from Nigeria and adjacent countries of West Africa, and they suggest that their course is intended primarily as a contribution to earth-science education in that region. Be that as it may, the subsoil of the Niger delta has quite some structural variation to offer. More or less on this basis, the twenty-three exercises are subdivided into three groups, *viz.* (1) Relatively undeformed Dahomey-western Niger delta passive transform margin; (2) Deformed western Niger delta; and (3) Deformed eastern Niger delta. Each individual exercise consists of line drawings of the seismic profiles involved (inclusive of a location map), the uninterpreted versions of the same seismograms and an accompanying text in the manual. Due to lack of well control, the authors did not attempt to provide suggestions for a sequence-stratigraphical interpretation of the profiles. The atlas figures mostly are of good quality except for Figure 4, which reminds us of *rift-drift* experimental poetry though it is meant to be a stratigraphic column.

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