INTERNATIONAL EXPLORATIONISTS GROUP EVENING MEETING—OCTOBER 16, 1986

MICHAEL G. WADDELL—Biographical Sketch

Michael G. Waddell is a senior geologist in the Reservoir Geology Group at NL Erco/NL Industries. Mike received both his B.S. and M.S. in geology from the University of South Carolina in 1979 and 1982 respectively. His thesis was on the depositional environment of the Upper Cretaceous in the Upper Magdalena Valley in Colombia. From 1982 to 1984 he was a research geologist at the Earth Sciences and Resources Institute at the University of South Carolina. At the institute, he worked on a comprehensive core study of the Guadalupe Formation to develop depositional models of modern coastal plain deposits. In 1984 he began work in the clastics group within reservoir geology at NL Erco/NL Industries, working the onshore and offshore Gulf of Mexico, the Ivory Coast and West Africa in general, the North Sea, and Colombia, South America.

Mr. Waddell has published abstracts with the Southeastern and Northeastern sections of the Geological Society of America. The most recent (1978) was with P. J. Muthig on the factors affecting the continuity of coal seams in the Salyerville area of Kentucky. Earlier ones included work with P. K. Ray and D. D. Domeracki (1976) on transgressive barrier island sedimentation in the tide dominated coastline of South Carolina and with Ray, Domeracki and J. W. Clark (1975) on the littoral process-form relationship of the mesotidal shoreline of Beaufort County, South Carolina.

In addition to the Houston Geological Society, Mr. Waddell is a member of the American Association of Petroleum Geologists andnd the Society of Economic Paleontologists and Mineralogists.

THE RELATIONSHIP OF POROSITY DEVELOPMENT AND DIAGENESIS IN THE UPPER CRETACEOUS GUADALUPE FORMATION, NEIVA BASIN, COLOMBIA

The Guadalupe Formation, a prolific hydrocarbon producing shallow marine sandstone, has a complex diagenetic history resulting in reservoirs which are characterized by abundant secondary porosity. The development of the secondary pore system is controlled by the pore water chemistry and depositional environment. A study of the Palogrande, Tello, and Cebu Fields shows significant variations in the type and amount of secondary pores, secondary cements, and authigenic clay in all three fields. Illite and chlorite occur in variable amounts in each field, but are less common in the Cebu Field. Distinct stratigraphic intervals containing chlorite have been identified, suggesting that depositional environment controls its occurrence. In environments where original sediments had the highest porosity, diagenetic processes have resulted in the greatest reduction in porosity and permeability.