

**HGS LUNCHEON MEETING—
JANUARY 29, 1992**

**Social Period, 11:30 a.m. - 12:00 p.m.,
Luncheon and Meeting, 12:00 p.m.
The Houston Club**

PATRICK S. NEALE—Biographical Sketch



Patrick S. Neale received his B.A. degree in geology from Hanover College in Indiana in 1976 and his M.S. degree in geology from Miami University in Ohio in 1979. He began work with Chevron in New Orleans in 1979 as an exploration geologist in East Texas and North Louisiana. In 1981 he moved into development geology where he has since held several positions. He is currently the

District Development Geologist for the Bay Marchand District, responsible for supervising the geologic activity in Bay Marchand Field.

**MODERN TECHNOLOGY IN AN OLD AREA—
BAY MARCHAND FIELD REVISITED**

Bay Marchand Field is a mature, giant oil field along the Louisiana coastline in the Gulf of Mexico. Chevron discovered the field in 1949 and has since drilled over 800 wells and produced over 530 MMBO. In 1986, with daily production at an all-time low of less than 17,000 BOPD, Chevron acquired a 3-dimensional seismic survey with the following objectives: 1) delineate new reserves; 2) review mature, drilled areas for additional development opportunities; and 3) assist reservoir management. The final goal was to bring together the disciplines of geology, geophysics, and petroleum engineering to increase the daily and ultimate production from the field.

Since acquisition, the survey has aided structural interpretation by providing better resolution of the salt/sediment interface and allowing good correlation of fault patterns and the resulting reservoir geometries. Stratigraphically, better understanding of log correlations, paleoenvironments, and sand distribution patterns has resulted. Daily production has dramatically increased to 40,000 BOPD with new opportunities being recognized daily. The use of this new technology, combined with teamwork, is primarily responsible for the turnaround. Opportunities of a similar nature will continue to present themselves elsewhere with the continued acquisition of 3-dimensional seismic data in the Gulf of Mexico.