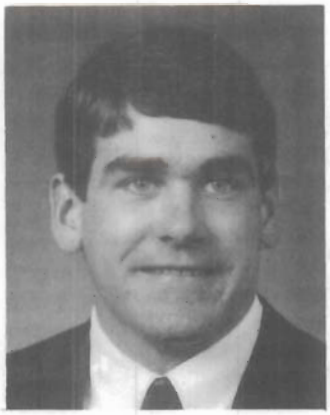
LUNCHEON MEETING—JANUARY 27, 1988

CHRISTOPHER J. WHITTEN—Biographical Sketch



Christopher J. Whitten is currently completing his M.S. in Geology at Texas A&M University. He obtained his B.S. in Geology from Trinity University in San Antonio in May of 1985. At Trinity University, Chris was President of Sigma Gamma Epsilon Geological Honor Society, a member of Alpha Lambda Delta National Honor Society, a member of the Triniteer Social Fraternity. Chris was employed by the Trinity Geology Department as a lab instructor. He is currently an undergraduate lab instructor at Texas A&M.

A native of Midland, Texas, Chris has spent several summers working on projects in the Permian Basin. Employed by Amoco in Houston during the summer of 1986, Chris worked on the Alabama Ferry field in Leon County. He is a member of the AAPG, the South Texas Geological Society, and the West Texas Geological Society.

ROBERT R. BERG—Biographical Sketch

Robert Berg is Professor of Geology and holds the Michael T. Halbouty Chair at Texas A&M University. His academic experience was preceded by industrial experience of 16 years with The California Company, Cosden Petroleum Corporation, and as a consulting geologist. In 1967 he became Professor and Head of Geology at Texas A&M, and from 1972 to 1983 was Director of the Office of University Research. His publications include a textbook entitled **Reservoir Sandstones** (1986, Prentice-Hall, Inc.) and papers on the role of hydrostatic and hydrodynamic pressures in oil accumulation.

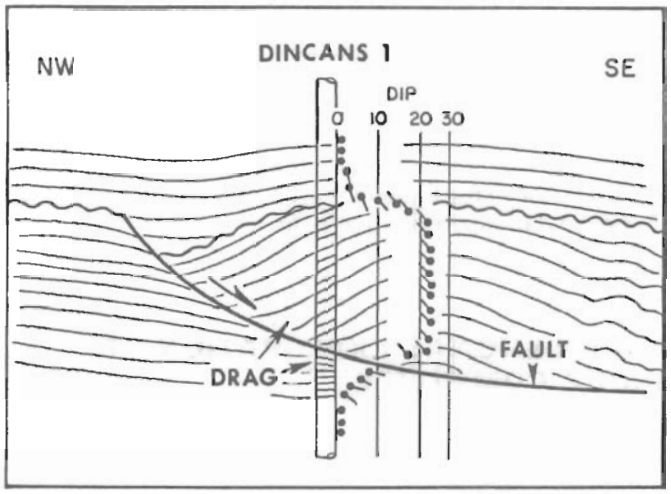
He received his B.A. and Ph.D. degrees in geology from the University of Minnesota (1948, 1951), and he has served as President of the Rocky Mountain Association of Geologists (1966) and the American Institute of Professional Geologists (1971). He is a Fellow of the Geological Society of America, an Honorary Member of the Gulf Coast Association of Geological Societies. He has been a Distinguished Lecturer of the AAPG and has received the Association's A. I. Levorsen Memorial Award on four different occasions. In 1981 he was awarded the AIPG's Ben H. Parker Medal for "Outstanding Service to the Profession".

DEPOSITIONAL ENVIRONMENT OF DOWNDIP YEGUA (EOCENE) SANDSTONES, JACKSON COUNTY, TEXAS

Downdip Yegua sandstones at a depth of 8300 to 8580 ft (2530 to 2615 m) were partly cored in the ARCO Jansky 1. Total thickness of the sandstone section is approximately 240 ft (73 m). The sandstones are enclosed in thick marine shales and are about 20 mi (32 km) downdip from thicker and more abundant sandstones in the Yegua Formation. The section is similar to reservoirs recently discovered in the area at the Toro Grande (1984), Lost Bridge (1984), and El Torito (1985) fields. The sandstones are fine-to-very-fine-grained and occur in thin beds that are 0.5 to 9 ft (0.15 to 2.7 m) in thickness. Sedimentary structures within the beds range from a lower massive division to a laminated or rippled upper division. Grain size within beds fines upward from 0.18 mm at the base to 0.05 mm at the top. The sandstones are interpreted to be turbidites of the AB type that were deposited within channels. The sandstones contain an average of 50% quartz and are classified as volcanic-arenites to feldspathic litharenites. Carbonate cement is variable from 0 to 27%. Average porosity is 29% and permeabilities are in the range of 60 to 1600 md in the clean sandstones. Much of the porosity is secondary and is the result of the dissolution of cements, volcanic rock fragments, and feldspar grains. Yegua sandstones produce gas and condensate at nearby Toro Grande field on a gentle, faulted anticline. The local trend of reservoir sandstones is controlled in part by faulting that was contemporaneous with deposition.

Correlation of the available cores with the dip log shows that zones of increasing dip (see diagram) are structural, and not depositional, features. The pattern of increasing dip downward forms normal fault patterns that coincide with contorted beds in the core. The faulting apparently caused soft sediment slumping shortly after deposition.

Our interpretation holds that the Yegua stratigraphic and structural relationships in the Toro Grande area demonstrate turbidite transportation across the shelf from the Yegua delta complex to a depositional site on the downthrown flank of an active growth-fault structure.



Diagrammatic illustration of rotated slump block in the downdip Yegua turbidite channel sandstones, Cities Service Dincans 1, Gas Unit 1, Toro Grande field, based on core examination and dip-log interpretation. Slumped section is about 60 ft (18.3 m) in thickness.