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... from approximately 80 recent wells in
... permit substantial refinement of
... Florida basement structure.
... Cretaceous, and Tertiary sedimenta-
... Florida overlap the eroded surface of a base-
... which ranges from Precambrian to Juras-
... As determined by previous workers, the main
... underlying Florida is the Peninsular
... a large Precambrian block covered by Pa-
... sedimentary rocks. A similar, smaller crustal
... in Jackson County, occupies the Florida
... in both blocks. Ordovician to Devonian
... describe a deeply truncated Precambrian
... which was affected by Cambrian igneous in-
... The Paleozoic rocks were subjected to Late Pa-
... with some volcanic activity followed by
... associated tilting, block faulting, and post-
... igneous intrusion during the Triassic Period.
... presented here clarify the succession and are-
... of some of the volcanic and hypabyssal
... showing that Jurassic basalt flows covered the
... and below the 28°N parallel.
... Florida part of the Florida-Bahama plat-
... represents crust which was continental
... Paleozoic time.
... data from Florida do not support the
... hypotheses about the history of the
... platform and the Gulf of Mexico re-
... and new geologic data are consistent
... attempts to reconstruct the history of
... of Mexico region by rifting during the opening
... Atlantic Ocean basin. This agreement is
... evidence for the operation of plate tec-
... rather than direct, conclusive proof.
... favors the hypothesis outlined by Free-
... (1972). The circumstantial nature of evi-
... the former activity of plate tectonic mecha-
... Florida need not hinder the application of new
... theories to petroleum exploration in Mesozoic
... of the Florida-Bahama region and the outer conti-
... of the Atlantic Coast.
... C. A., America Southwest Corp., Jackson,
... Jasper County, Mississippi—Unique Ju-
... Oil Accumulation
... field is significant because it is unique from
... fields in the southeastern United States.
... zone is a Haynesville-Buckner sand-
... overlying the Jurassic Haynesville-Buck-
... evaporite sequence.
... efforts on the prospect extended over a
... several years prior to the discovery.
... productive sandstone appears to be an offshore
... separated the Jurassic carbonate-evaporite sea
... nearshore area of sand accumulation. Directly
... the productive sandstone interval is a thin im-
... limestone, representing a slight transgressive
... of the Haynesville-Buckner carbonate sea. It is
... limestone which forms the seal for the reservoir and
... as a unique oil accumulation.
... though the field is still relatively young, it appears
... a very good commercial venture but does not ap-

pear to be the type that would warrant a strong explora-
tion effort in a rank wildcat area.

BEBOUT, D. G., and O. K. AGAGU, Bur. Econ.
Geol., Austin, Tex.

Depositional Framework of Frio Formation (Oligo-
cene)—Lower and Middle Texas Gulf Coast

The Frio Formation is one of several basinward-
thickening wedges of sand and shale in the subsurface
of the Texas Gulf Coast; the Frio is less than 500 ft
thick updip and more than 10,000 ft thick downdip near
the coast. The basinward thickening is the result of slow
regional subsidence and of more rapid local movement
along major growth faults. The objectives of this paper
are to illustrate the regional sand-shale facies distribu-
tion and relation and present preliminary data needed
to evaluate the geopressure-geothermal resources of the
Frio Formation along the lower and middle Texas Gulf
Coast.

On the basis of foraminifer zonation, major deposi-
tional patterns, and structure, the Frio is subdivided on
regional dip and strike cross sections into six subunits.
From these cross sections and sand percent and net
sand maps three main depositional patterns are recog-
nized. (1) The updip part of each unit consists of thin
linear dip-oriented sand bodies separated by thick
shales and local lignites, representing channel and over-
bank facies of a fluvial system. (2) In the southern part
of the study area and downdip of the fluvial system,
thick sand bodies broadly oriented in a dip direction are
separated by thick shales. These sand bodies were de-
posited in a high-destructive wave-dominated delta sys-
tem. (3) North of the delta system, thick strike-oriented
sand bodies accumulated in an extensive strand-plain
system.

Contemporaneous faulting, which resulted from sedi-
ment loading, allowed vertical stacking of thick sand
bodies in the Frio and reduced basinward progradation
throughout much of the lower and middle Texas Gulf
Coast.

BOONE, P. A., Geol. Survey of Alabama, University,
Ala., and D. B. MOORE, Oil and Gas Board of Ala-
bama, University, Ala.

Churchula Field—Giant in the Making?

Churchula field, one of Alabama's most significant
discoveries, is located approximately 20 mi north of
Mobile. The field was discovered in December 1973,
with the successful completion and testing of the Union
Oil of California International Paper Company 22-13 1
(Oil and Gas Board Permit 1886). Union's International
Paper Company 21-11 1 (Permit 1973), a western offset
to the discovery, was completed as the confirmation
well. Additional wells successfully have extended the
field northwest and west. Churchula presently has four
producibile wells, one dry hole and several other wells in
different stages of development.

Production of sweet gas and low-sulfur, high gravity
condensate is from Smackover dolomites at depths
ranging from 18,400 to 18,510 ft. Seventy-seven ft of
total pay is estimated in the discovery well. Churchula
field is located on a large structure with approximately
300 ft of closure.