

aid in exploiting massive tight gas formations may open up new opportunities for gas development. However, the future supply of natural gas is primarily related to exploration effectiveness which depends more on profitable expectations than on technological developments.

"In brief, the overall picture suggests that, with appropriate profit incentives, there is considerable room for improving recovery efficiency and developing productive capacity in our crude oil and natural gas reservoirs through the 1970's. If this, coupled with exploration effectiveness, turns out to be less than desired, the industry is developing technology for providing crude oil and gas supplements from tar sands, oil shale, and coal."

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April 24, 1967

EDWIN D. GOEBEL

Kansas Geological Survey,
Lawrence, Kansas*"Cowley Problem, Mississippian of
Southcentral Kansas"*

Lee (1940) named the Cowley Formation for rocks which he believed were deposited in a basin eroded from Osagian and older rocks in a large area in southcentral Kansas in pre-Meramecian time. The Cowley Formation is mapped by Lee as extending in an east-west belt 15 to 75 miles wide north of the Oklahoma border in southcentral Kansas. Silty and siliceous dolomite, limestones, dolomitic siltstone, and variably large amounts of dark, opaque, microfossiliferous chert and chalcadonic chert characterize the Cowley. Locally non-cherty carbonate rocks make up the Osagean and Meramecian rocks within the area of the Cowley. Lee reported that a concentration of glauconite occurs progressively lower stratigraphically westward in Kansas from the eastern Kansas border in pre-Meramecian rocks.

Cores and acid residues examined in the studies by Thompson (1964) and Goebel (1966) revealed the presence of conodont faunas that indicate the Cowley Formation ranges in age from early Osagian into late Meramecian. A normal sequence

of Osagian and Meramecian formations is present in southcentral Kansas. Traces of glauconite and secondary sulfide minerals are present locally in these formations. The term Cowley Formation should be replaced by Cowley Facies.

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May 1, 1967

JOHN WONCIK

Apache Oil Corporation, Tulsa
*"Recent Drilling Activity
in Cook Inlet, Alaska"*

Commercial production was established in Alaska in 1957 at Swanson River. Since then, four major oil pools and two major gas pools have been discovered. Future exploration should uncover reserves which will place Alaska as a major oil-producing State in the next ten years.

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May 8, 1967

RAYMOND H. POTTS

Potts-Stephenson Exploration Company,
Oklahoma City*"The Deposition Environments of the Spiro
Sands in the Arkoma Basin"*

Isopachs and electric log cross-sections of the Spiro Sands in Wilburton, Kinta, and Milton-Cartersville Fields are used to illustrate the speaker's interpretation of the depositional environment of these sands in the Arkoma Basin.

At least three sands, differing genetically and in age, have all been termed the Spiro Sand in the Arkoma Basin.

In the Wilburton Field, the Spiro Sand appears to be a marine facies of the Wapanucka Limestone and is possibly Morrowan in age.

Such characteristics as geometry of the sandstone bodies, sedimentary structures, composition, nature of the boundaries and other features, leads the speaker to believe that in the Kinta and Milton-Cartersville areas the Spiro Sands were deposited in an environment likely to produce channel, as well as transgressive unconformity sand deposits.