



further prospecting and detailed surface mapping to discover new structures.

#### TOWNSHIP 47 NORTH, RANGE 29 AND 30 WEST

This area contains three small commercial gas fields, a group of gas wells that have never been used commercially and the usual scattering of dry holes and water wells.

*Outcropping Formations.* Practically the entire area is underlain by the lower three members of the Kansas City formation and in a few places in the Knorpp pool small outliers of the overlying Cherryvale shale remain. In other places the larger streams have cut down into the top of the Pleasanton.

*Producing Horizons.* The Wayside sand is the first horizon penetrated that shows gas, but it is insignificant in quantity. The main production in the Knorpp pool comes either from the Squirrel sand or the Warrensburg channel sand which trends in a northwest-southeast direction across Section 32 and 33, T. 47 N., R. 30 W. The channel sand here has a maximum thickness of 70 feet. It generally rests on the limestone below the Lexington coal horizon, but where the maximum thickness is developed even this has been cut out. The Squirrel sand is well developed, one of the wells penetrating 80 feet of sand at this horizon. In the Shawhan and Lone Jack pools the main production is also from the Squirrel sand, but the channel sand is missing. Some gas is also found in the black shales at the Lexington, Summit, and Mulky coal horizons. One well (Map No. 86) Ott Clark No. 7, SE $\frac{1}{4}$  NW $\frac{1}{4}$  NE $\frac{1}{4}$ , Section 32, Township 47 North, Range 30 West, in the Knorpp pool was drilled to the Mississippian limestone. The log shows 95 feet of sand and shale at the so-called Bartlesville horizon and 35 feet of Burgess sand, though neither was productive. Two wells were drilled to the "Lime" in the Shawhan pool and in one, D. Lee Shawhan No. 6 (Map No. 23), NW $\frac{1}{4}$  SE $\frac{1}{4}$  SE $\frac{1}{4}$ , Section 14, Township 47 North, Range 30 West, drilling was finally stopped at 1265 feet. The so-called Bartlesville sand was absent and the Burgess carried water.

The gas from the three pools is purchased by the Interstate Gas Company of Harrisonville, Missouri, and since production records of the three are combined, they will be considered as one in this discussion. The Knorpp pool lies in Sections 32 and 33, Township 47 North, Range 30 West, and