Oil and Gas in Cass County, Missouri

by Bruce Netzler

The first reliable records of drilling in Cass County are dated 1902 to 1906. During that period some 15 wells were drilled near Belton. Their average depth was 200 to 400 ft. Most of these early wells produced gas from the Hepler Sandstone Member (Wayside sand) and thin sands and black shales in the Pleasanton Group. Initial production was 40,000 to 1,000,000 cu. ft. with pressures of 10 to 120 psi. Gas from these wells illuminated and heated some 75 homes in Belton for several years.

An east-west cross section of the county is shown directly below the county map. On the cross section, the major sand zones, which are the potential oil and gas producing intervals, are marked. The depth varies with topography, but generally, because the regional dip of the beds is 20 to 50 ft/m to the west-northwest, they are deeper in the west than in the eastern parts of the county.

The geologic column on this page shows the rock types that may be encountered when drilling in the county. The beds that may contain oil or gas are marked. Based on subsurface structure there are certain areas that have greater potential than others for oil and gas accumulation, and they are so marked. This does not mean that oil or gas will be found in these areas — only that the potential is higher.

Information About Drilling a Gas Well

1. The operator of the well will be required to file certain forms and follow certain rules in compliance with the Oil and Gas Council Rules and Regulations before drilling, completing, and/or abandoning a well. "Monthly well status and production reports may be waived by the state geologist upon application in the event that gas production by an owner is for his sole and private use." (A copy of the Oil and Gas Council Rules and Regulations is available from the Department of Natural Resources, Division of Geology and Land Survey, P.O. Box 250, Rolla, Missouri 65401, or call 314/364-1922.)

2. To insure protection of any possible water horizon, hire a competent driller familiar with casing and cementing requirements.

3. Groundwater must be protected from contamination by proper casing and cementing.

4. Proper maintenance of gas wells is important — gas leaks can be dangerous. Natural gas is odorless, but commercial gas companies usually add an easily detectable odor supplement to warn of gas leaks.

5. Some gas wells produce gas and water vapor. In the winter, when gas is most needed, water vapor condenses and collects in low places in the pipes and may freeze, causing ruptures in the line. If a separator is used, the water separated will be in low places in the pipes and may freeze, causing ruptures in the line. If a separator is used, the water separated will be

6. A well approximately 600 feet deep will cost an estimated $4,000 to $6,000. There are drillers who are cheaper, but be careful, because some may not follow Oil and Gas Council Rules, a practice that could result in contamination of your water supply.

7. Remember, there are more nonproducing wells than producing wells.

References

*Clair, J., 1943, Oil and gas resources of Cass and Jackson Counties: Missouri Geological Survey and Water Resources, v. 27, 2nd Series.


*Missouri Department of Business and Administration, Division of Geodetic Survey and Water Resources, 1969, The stratigraphic succession in Missouri: Rolla, Missouri, v. 40, 2nd Series.


Footnote:

*Publication is out of print.